

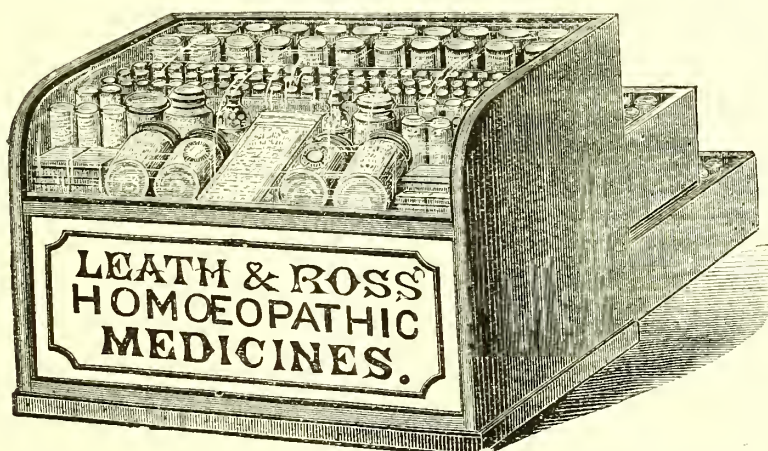
LEATH & ROSS'S HOMŒOPATHIC PHARMACIES

9 VERE STREET, W.,
And 5 ST. PAUL'S CHURCHYARD, E.C., LONDON.

OUR £10 10s. AGENTS' SHOW CASE.

Contents realise £17 17s. 8d.

DIMENSIONS.—Length, 18 in.;
Breadth, 13 in.; Height, 13 in.



DESCRIPTION.—A Handsome Bent Glass Case, with three drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in the other two in alphabetical order.

WHOLESALE PRICE LIST OF MEDICINES PUT UP READY FOR SALE.

GLOBULES or PILULES—

Sixpenny Tubes	...	...	2/9 per dozen.
Ninepenny	„	...	4/3 „
Shilling	„	...	5/- „

TINCTURES or TRITURATIONS—

Sixpenny Bottles	...	...	2/9 per dozen.
Ninepenny	„	...	4/3 „
Shilling	„	...	5/- „

PROPRIETARY ARTICLES.

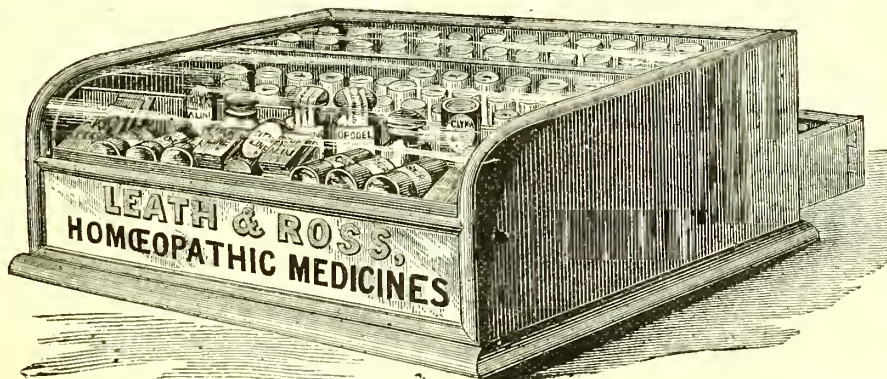
Neuraline	...	...	1/1½	Berberine	...	...	1/1½	Linimentum Auricularis	...	1/1½
Glykaline	...	...	1/1½	Chilblain Liniment	...	...	1/1½	Bryonia Liniment	...	1/1½
Phospho-muriate of Quinine	1/1½			Odontagie Essence	...	...	1/1½	Corn Eradicator	...	1/1½

All the above Proprietary Articles, 9/6 per dozen.

OUR £6 6s. AGENTS' SHOW CASE.

Contents realise £10 18s. 3d.

DIMENSIONS.—Length, 20 in.;
Breadth, 15½; Height, 9½ in.



DESCRIPTION.—A Handsome Bent Glass Case, with two drawers, the contents of top drawer visible, the Pilules and Tinctures arranged in alphabetical order.

SPONGES.

R. CRESSWELL
& CO.



ESTABLISHED
1850.

PLEASE TAKE NOTE—

That—We hold every description of Sponge, and the largest and best assorted stock in the world.

That—We have imported and sold the finest Cuban Sponges for 36 years, and that *no firm extant has any monopoly whatever*, the right of Sponge fishing in Cuban waters being easily obtained by payment of a small fee to the Government.

That—Our Trade Mark, Prices Current, and Form of advertisement are being unscrupulously followed, thereby misleading our regular customers both at home and abroad.

To this your particular attention is requested.

That—Our long-standing and exceptional position on the Fisheries, and the enormous stock we hold of every description of Sponge, enable us to furnish, as everywhere acknowledged, **THE VERY BEST VALUE** in executing all orders entrusted to us, and, at the same time, with the greatest dispatch and accuracy.

That—We shall be happy to supply our Complete Price List to any inquirer on application.

That—Our Name and Address remain unchanged, and are

R. CRESSWELL & CO.,

32 RED LION SQUARE, LONDON, W.C.,

which please note specially so as to avoid confusion and prejudice to customers' interests.

For full particulars see Illustrated Price List in June Number and Diary.

ESTABLISHED 1850.

Telegraphic Address—"CRESSWELL LONDON."

SPONGES.



ESTABLISHED 1850.

R. CRESSWELL & CO.,
SPONGE IMPORTERS & MERCHANTS,
 32 RED LION SQUARE, LONDON, W.C.;
 And at **PIRÆUS** and **SMYRNA**.

LARGEST AND BEST ASSORTED STOCK IN THE WORLD.

**HONEYCOMB
 SPONGES**

IN CASES.
 IN BOXES.
 IN BALES.
 ON STRINGS.
 ON CARDS.
 BY WEIGHT.

**FINE TURKEY
 SPONGES**

IN CASES.
 IN BOXES.
 IN BALES.
 ON STRINGS.
 ON CARDS.
 BY WEIGHT.

All kinds of Florida, Bahama, Egyptian, and Cuban Sponges in large variety.

FOR FULL PARTICULARS SEE ILLUSTRATED PRICE LIST IN OCTOBER NUMBER AND DIARY.
 SEPARATE LIST SENT FREE ON APPLICATION.

ESTABLISHED 1850.

5 EXHIBITION MEDALS (HIGHEST AWARDS).

NO CONNECTION WITH ANY FIRM OF SIMILAR NAME.

THE ORIGINAL HOUSE. NOTE STYLE AND ADDRESS.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C., CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION. Immediate attention given to Foreign Commissions. The Business conducted by Messrs. ORRIDGE & CO. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application:—

1. LONDON, W.—Handsome first-class Pharmacy, situate in a select locality, commanding a good connection; about £1,000 is required, for which full value is offered.

2. LONDON SUBURB, S.W.—In a pleasant locality; Retail and Dispensing Business; very handsome shop; returns increasing, present rate £600 yearly; comfortable 8-roomed house; rent £35; price £325.

3. LONDON, N.—Retail and Dispensing; very select genuine Business of good class; returns average £500, profits above the average (nearly 50 per cent.); well fitted attractive shop and good house; price about £500.

4. LONDON, W.C.—Retail and Dispensing, with some Mixed Wholesale; very old-established concern; returns average over £2,000, net profits £500; lock-up premises; no Sunday or Holiday trade; vendor retiring; price about £1,200.

5. LONDON, N.E.—Retail and Prescribing, very profitable concern; returns under management £425; good house; moderate rental; vendor having purchased a larger business will accept £175 from an immediate purchaser.

6. BANKS OF THAMES.—Very pretty locality; sound and comfortable Business; present returns £550; shop is well stocked; house contains 6 rooms and shop; large garden well stocked with fruit trees, &c.; price £550.

7. SOUTH WALES.—Dispensing and Retail Business; held by vendor many years; returns average £800, can easily be increased; good house and garden, with greenhouse; price £600.

8. SURREY.—Unopposed Country Business of good class; returns last year over £500, with good profits; comfortable house, good garden; locality attractive; price £275.

9. KENT.—Good market town; Retail and Dispensing, with a large sale of Proprietary Articles; returns nearly £300; good house, well situated; price £800; vendor has large stock.

10. EASTERN COUNTIES.—Good-class Retail and Agricultural Business; returns average £300 yearly, with good profits; good house, garden, fruit trees, and greenhouse; price £750; worth attention.

N.B.—NO CHARGE TO PURCHASERS. Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free. Terms for Valuation on application. **ORRIDGE & CO.**

THE CHEMIST AND DRUGGIST is published weekly.

THE CHEMIST AND DRUGGIST is the business organ of the trade.

THE CHEMIST AND DRUGGIST is subscribed for by the principals of Drug establishments.

THE CHEMIST AND DRUGGIST is looked for and read by masters, assistants, and apprentices.

THE CHEMIST AND DRUGGIST has the widest and most influential circulation of British Journals of Pharmacy.

For these reasons it is the best medium for letting the Drug trade know of *Businesses for Disposal*, *Businesses Wanted*, *Situations Vacant*, and *Situations Wanted*.

All Advertisements should reach the Office,
42 Cannon Street, not later than Thursday
next.

SALES BY TENDER.

NOTTINGHAM.

F. J. BRETT is instructed to Sell by Tender in one lot, as a going concern, the business of a Chemist and Druggist, with stock-in-trade, fixtures, fittings, and utensils, the property of Mr. G. U. Spratt, of 26 Sneinton Road, Nottingham; the business has been £20 per week, but from neglect is now only doing £5 in light retail, prescribing, and dispensing, this could readily be doubled; house very good; Mr. Spratt having accepted an appointment must sell quickly. Tenders will be opened by F. J. Brett, of Leicester, at 3 p.m., Thursday, July 15, at 26 Sneinton Road, Nottingham, when F. J. Brett will have pleasure in meeting buyers.

PRELIMINARY NOTICE.

F. J. BRETT is instructed to Sell by Tender, as a going concern, the business of Mr. A. L. Smith, 1 Coventry Road, Bordesley, Birmingham, on account of ill-health of wife; the position is a commanding one; returns last year £1008 6s. 0d. Orders to view and further particulars of F. J. Brett, Leicester. Sale, Friday, July 30.

FOR SALE.

THE GOODWILL AND STOCK-IN-TRADE OF OLD-ESTABLISHED RETAIL CHEMISTS' AND DRUGGISTS' BUSINESS, having practically the monopoly in village of 7,000 inhabitants and considerable surrounding district, within a few miles of both Leeds and Bradford; average turnover for last two years about £800; good opening for Dispensary; for immediate sale, in consequence of death; good house over shop, and store-room in yard for inflammables; business premises can be purchased or had on lease; offers wanted. For particulars apply, Messrs. Watson & Dickons, Solicitors, Bradford.

BUSINESSES WANTED.

WANTED, a light Retail and Dispensing Business; seaside preferred; returns about £1,000. F. W., Little Butts, Wadhurst, Hawkhurst.

WANTED, a Chemist and Druggist's Business, in a small country town or village, where there is an opening for a Veterinary Surgeon to combine the two. Address, M.R.C.V.S., care of Mr. Huish, 2 Primrose Villas, Forest Hill, S.E.

BUSINESSES FOR DISPOSAL.

All Advertisements should reach the Office,
42 Cannon Street, not later than Thursday
next.

GLAMORGANSHIRE.—The Business of Mr. Rees T. Jones, Pharmaceutical Chemist, Treherbert, Rhondda Valley, who is retiring from business; successfully carried on for 12 years; valuable medical and colliery connections; rent and taxes low; easy terms to an immediate purchaser. Apply as above.

ESSEX.—Twenty-five miles from town, in a rising neighbourhood; Branch Business for disposal; doing between £5 and £6 per week, though only open six hours daily; capable of great extension; no other chemist within seven miles; splendid opportunity for a beginner. Apply, "Hope," care of Evans & Co., 60 Bartholomew Close, E.C.

LIGHT Retail and Prescribing Business in one of most important cities North of England; returns £550, capable of great extension; very profitable: corner shop, double front; well fitted; commanding position: going concern; satisfactory reasons for disposal: price £320. R. Mountain, 2 Sunnyside Terrace, Harrogate.

A VERY PROFITABLE Retail, Dispensing and Prescribing Business, in one of the most important suburbs of Liverpool; corner shop, well fitted and stocked; only *bonâ-fide* purchasers need apply; no agents. Address, F. 77, Mercury Office, Liverpool.

HARLESDEN (near Willesden Junction).—To Let, Shop in Fortune Gate Terrace, with good residence; in a splendid position for a first-class Chemist or other: adjoining the Police Station and National Bank; in best part of Harlesden, N.W.; rent £30. Apply to H. Wakefield, opposite shop.

EMPLOYERS WANTING ASSISTANTS.

THE PATENT BORAX COMPANY are open to engage a steady and industrious Young Traveller for ground outside and around Birmingham; all expenses paid; salary £150 to £200, commission in addition; must be able to show ability in Sale of Proprietary and other Packet Goods; the remuneration will be progressive, and none but travellers with good qualifications are invited to apply; by letter only; usual security. Address, Patent Borax Company, New Market Street, Birmingham.

WANTED immediately, an Assistant for a month or six weeks in a country business; to take entire management part time. Apply, with references and lowest terms, to L. Moody, Folkingham, Lincolnshire.

WANTED, a Junior Assistant or Turnover, willing to wait on families for orders; must have good references. Apply, by letter only, stating salary required, with full particulars, to Hearon, Squire & Francis, Coleman Street, E.C.

ASSISTANT wanted. Address, enclosing carte, stating age, reference, and salary required, Hay, Chemist, 4 Regent's Terrace, Hull.

ASSISTANTS WANTING SITUATIONS.

Announcements appearing under this heading are charged
12 WORDS FOR 1s.;
every additional 3, 4, or 6 words 6d.

ENGAGEMENT wanted, in good-class Country Business, to travel 2 or 3 days a week. "Aloe," 31 Devonshire Road, Birkenhead.

AS ASSISTANT; one year medical; passed Preliminary; gentlemanly. X., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

APPRENTICESHIPS.

TWO CHEMISTS, Pharmaceutical or Manufacturing.—Wanted, to place (together or separate) two well-educated Youths, aged 16, having considerable knowledge of Chemistry, and passed Preliminary exam., as Apprentices or Students for 3 years (outdoor); South Coast preferred. Address, Z., Messrs. Hovenden & Co., Architects, 181 Bishopsgate Street Without.

MISCELLANEOUS.

PRELIMINARY & MINOR.

ALL STUDENTS who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 43 out of 51 Pupils passed the last Examinations.

ATTENTION!!!

DURING the long summer evenings Chemists might very profitably employ their time in making up goods for winter sale. For instance, a few cheap thimbles of different sizes, a water-bath, and a few pounds of menthol crystals would pay handsomely. We offer 1 lb. of pure Japan Menthol for 10s. 6d., or an original 5 lb. tin for 50s., carriage paid by parcels post on receipt of a P.O.O. for the amount. "Yosheda," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

REDUCED PRICES

FOR

MEDICAL BOTTLES

Superior Quality, Plain and Grad., any Shape.

3 oz. & 4 oz. 6 oz. & 8 oz. 10 oz. & 12 oz.

6/ 7/ 10/9 per gross.

Panelled, Pale Green, Best Quality.

1½ oz. & 2 oz. 3 oz. & 4 oz. 6 oz. & 8 oz. 10 oz. & 12 oz.

6/8 7/3 8/3 12/ per gross.

N.B.—Not less than 6 gross assorted sizes sold at the above prices.

Equally low quotations for FLINT Bottles of all kinds.

THE NEW "QUININE" TINTED MEDICALS.

BOTTLES MADE FOR "SPECIALITIES."

Flint Vials, Moulded, Good Quality.

1 dr. 2 dr. ½ oz. 1 oz. 1½ oz. 2 oz. 3 oz. 4 oz.

2/5 2/8 2/10 3/3 3/11 4/6 6/ 7/ per grs.

Not less than 10 grs. assorted sizes at these prices.

"IMPROVED" BENT

FEEDING BOTTLES

With 7-inch black fittings, for grs. 27/; and lettered with any name and design, free for 5 grs. orders.

Glass Screw "Feeders," with 7-in. Black Fittings, for grs., 33/.

All "Sandries" equally cheap, and guaranteed of a superior quality.

T. W. SIMCOCK,
17 Guildford St., LEEDS.

SUPERIOR **GUARANTEED** **SUPERIOR QUALITY.** **CONCENTRATED** **EXTRA STRONG.** **EXTRA PALE.** **SIZE**

More economical than ordinary Size; more readily prepared for use.
 In 1 lb. Packets, in Boxes of 23, 53, and 112 lbs.

GEORGE FARMILOE & SONS

Lead, Colour, and Varnish Merchants,
 34 St. John's Street, West Smithfield, LONDON, E.C.

ESTES' AMERICAN DRUGGISTS' & CHEMISTS' TURNED WOODEN BOXES.

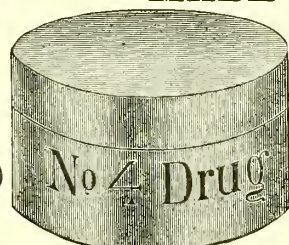
PILL, POWDER, AND SALVE BOXES.
FINELY-FINISHED FACE AND TOOTH POWDER BOXES.
BOXES FOR SENDING VIALS BY PARCEL POST.

Boxes for Proprietary Articles.

ESTES' GREASE-PROOF TURNED WOODEN BOXES



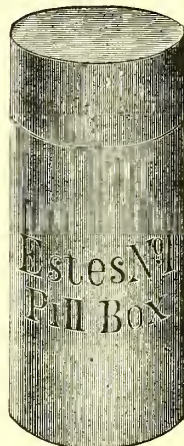
BOXES OF EVERY STYLE & FINISH
MADE TO ORDER.



*Boxes equal to English Manu-
facture at lower prices.*

USE WOODEN BOXES

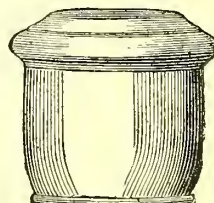
In place of Paper or Tin.



SOLE AGENTS FOR
GREAT BRITAIN.

KILNER BROS., KING'S CROSS, LONDON, N.

ESTABLISHED 1855.



J. ROGERS & CO., MEDICAL BOX TURNERS,

1, 2, 3, & 47 CARTER STREET, WALWORTH, LONDON,

Turners of every description of Tooth Powder, Plate Powder, Pill and Puff Boxes, used by Chemists, Perfumers, &c.
All Boxes of our make are finely finished. Patentees and Manufacturers of the

SILICATED GREASE PROOF BOXES

These Boxes are turned out of Willow and Silicated inside, rendering them quite grease proof, and will be found very convenient to send by Post. They are very light, being one-sixth the weight of covered pots. They are not breakable. The lids fit quite air-tight. They will stand in any climate. They are cheap.

SPECIAL NOTICE.

Our Boxes being made of White English Willow will not injure the most delicate preparations, and will be found quite free from the objectionable oily smell of some Boxes now being sold.

BEFORE ORDERING TURNED WOOD BOXES PLEASE SEE OUR SAMPLES AND PRICES.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid.

DEPOSIT OF MONEY.—In order to ensure safety we offer the following system:—The Purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post-cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of 3l. or less, or 1s. if above that amount.

Please note that the Exchange Column appears Weekly. Advertisements must be received not later than Thursday next. Chemists will do well to look up their Surplus Stock and send an Advertisement of same.

FOR DISPOSAL.

Drugs and Chemicals.

Surplus drugs and patents for sale or exchange. Send for list to Watson, Chemist, Shipley.

Educational.

Squire's "Companion," 13th edit, unused; free, 5s. Hinde, 175 Uxbridge Road, W.
To Students.—"Hints on Difficult Pills, and their Excipients;" post free 7 stamps. Clifton, 13 St. Michael's Terrace, Wood Green, London.
Ellis' "Diseases of Children"; Aitkin's "Outlines of Medicine"; Garrod's "Materia Medica," 6th edit.; Martindale's Pharmacopœia, 3rd edit.; Tanner's "Clinical Diseases"; Tanner's "Index of Diseases"; or will exchange for Attfield's "Chemistry," recent. Pemberton, 49 Molbram Road, Hyde.

Literature.

Chemist and Druggist, monthly 9d., weekly 2d.; Journals, 2d., since 1861; Diaries, 2s., post free; or offers. Williams, Chemist, Coleford, Gloucestershire.

Formulæ.

Seasonable Proprietarys, wanted daily.—"Mollisopœna," for tender feet; "Red Rose Lotion," invaluable at seaside; "Glycerine Cream," resembles Becham's; "Perspiration Powder," effective without danger; "Effervescent Saline," like Eno's, costs 10d. lb.; "Diarrhoea Mixture," pronounced infallible; "Diarrhoea Powders," indispensable to tourists; "Custard Powder," like Bird's; delicious "Blancmange Powder," economical and tasty; "Bengal Chutney," makes cold meat enjoyable; $\frac{1}{2}$ "Ginger-beer Powder," unexcelled; 3d. packets "Lemonade Powder," cooling, refreshing, cheap; "Syrup Lemons," new form, delicate flavour; "Herb Ale," non-alcoholic, sparkling; "Bark Beer," true temperance potation; "Cold Cream"; "Toilet Vinegar"; "Eau de Cologne"; "Hair-washes," &c. Recipes 1s. 1d. each, 6 for 5s., free, with full directions; send for list of 300. T. Brooks, Chemist, Louth, Lincs.

Shop Fittings.

Handsome specie-jar, as Maw's fig. 1; height, exclusive, 26 in.; square mahogany stand, 7 in.; price 45s. Nuttall, Higher Broughton, Manchester.

All numbers refer to Maw's illustrated of 1832.—Plate-glass wall case, A 88, 7 ft. 6 in. long, 22l.; plate-glass fronted counters, mahogany counters, mahogany-fronted drawers, new and second-hand wall fixture, complete with drawers, lockers, cupboard, shelving and cornice, 12 ft. long, 8l. 10s.; ointment jars, carboys, 8 and 10 gals. specie jars, pill-machines; shop rounds, 7s. 6d. doz.; toothbrush-case, 30s.; sponge-case, 60s.; counter-cases, fig. A 3, 40s.; A 4, 5l.; A 8, 5l.; A 8, 5l.; A 18, 5 ft., 4l. 15s.; 6 ft. long, 5l. 10s.; desks and cases, A 31, 60s.; cigar-cases; dispensing screens with marble centre with glass-case at each end, 5 ft., 5l. 10s.; others larger; dispensing-screens, A 54, 3 ft. long, 3 ft. 6 in. long, 4 ft. long; as fig. 55, 5 ft. long, 6 ft. long; Pinder's rotary pill-machine and piper, 5 grain, almost new, complete, 6l. E. Natali, 207 Old Street, London, E.C.

Second-hand Fittings.—Mahogany-fronted cornice and shelving, 3l. 10s.; 17 ft. 6 in., 74 mahogany-fronted dovetailed drug drawers, and 14 imitation coverboards, grained lockers, 8l. 10s.; plate-glass dispensing-screen, 4 ft. 6 in. by 2 ft., and tablet, 4l.; wall-case, sheet-glass, deal cupboard, 6 ft. by 3 ft. 10 in., 6l. 10s.; 2 counters, 14 ft. run, deal fronts, 26 drawers, shelves, 6l. 5s.; sheet-glass case, 3 ft. 5 in. high, 30 in. wide, 2l.; 2 counter-cases, circular plate glass, 36 in. by 12 in., sloping shelves, 50s. each; ditto, 42 in. by 18½ in., 3l. 10s.; upright ebonised glass case, circular ends, glass shelves, silvered back, 18½ in. high, 15½ in. wide, 2l.; enclosure front, 88 in. long, 69 in. high, 3l. 10s.; 15 ft. wall-counter, 5 drawers, deal cupboard, 3l.; 2 mahogany chairs, 20s.; 3-light chandelier, 15s.; 2, 2-light pendants, 12s. 6d.; 3 gas-brackets, 7s.; 30 doz. rounds, shield labels, nearly new. W. Hawke & Son, Wild Court, Great Wild Street, London, W.C.

Soda-water Plant.

Nearly new soda-water-plant, cheap.—1 pair 2½-inch pumps, on stand; 1, 25-gallon jacketed pan; 2, 16-gallon cylinders, on stands, fitted with agitators by Hayward Tyler; 1, 30-gallon lead generator; 1 large gasholder and tub; 2, 10-gallon portable cylinders; shafting, pulleys, &c. Idris & Co., Ascham Street, Kentish Town, N.W.

Miscellaneous.

Goodall's mixer, good condition, three sieves; cost 3l., for 15s. Bishop, Derby.

Cylinder and Engine Oils, small parcel, cheap, in good condition; also some gold bronze. Samples and particulars, H., 70 Monier Road, Old Ford, London.

250,000 labels for perfumery, about 100 sorts; to be cleared at 1s. per 1,000; an excellent job lot; for 2 stamps samples of many will be sent. Apply, Robinson, Waterloo, Blyth, Northumberland.

Fifty-six bicycle, "Royal Mail Racer," weight 24 lbs.; last year's machine, in perfect running order, very fast; price 8l., cost 16l.; too high; exchange for 54, or for drugs, &c., useful to chemist. Cox, Woking.

Glass Bottles.—About 8 gross pale-green tinted 3-oz. round pomades, screw nickel capped, 12s. per gross; 4 gross 14-oz. round-shouldered vials, white, best quality; several other lines equally cheap. Hearn, Riddell, Kingsland Road, London.

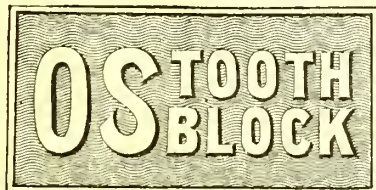
WANTED.

Pinder's pill-machine, in good condition. Frederick Gibson, Goose Street, Birmingham.

Muter's "Chemistry, Theoretical and Practical"; Muter's "Organic Materia Medica"; cash price. Loveluck, 7 Clare Gardens, Cardiff.

Chemical balance, second-hand. State full particulars, size, make, and description, and also price, to H. & Co., care of Ayrton & Saunders, 149 Duke Street, Liverpool.

THE BEST & SAFEST DENTIFRICE.



REGISTERED TRADE MARK.

OSCAR SUTTON & CO., Preston, Lancashire.

The following Testimonial from Mr. JAMES A. RED, Chemist and Druggist, Helensburgh, we quote by special permission: "Enclosed please find cheque in payment for the Tooth Blocks. I am highly pleased with their new form and extra inducements presented through the leatherette labels and chemist's own name stamped on each block. These give one special encouragement to keep prominently before an intelligent public what UNDOUBTEDLY IS THE GREATEST DENTIFRICE OF THE AGE."

No. 0.
Loose, without Boxes.

No. 1.
In Patent Metallic Boxes,
retail 1s.

No. 2.
In Crystal Caskets,
retail 2s. 6d.

OVER 1,000 TESTIMONIALS.

ESTABLISHED 1842.

THE SCHOOL OF PHARMACY*Of the Pharmaceutical Society of Great Britain.*

Chemistry, Prof. DUNSTAN, F.C.S., &c. Botany and Materia Medica, Prof. BENTLEY, F.L.S., &c. Practical Chemistry, Prof. ATTFIELD, F.R.S., &c. Practical Pharmacy, Emeritus Prof. REDWOOD and Mr. INCE.

FORTY-FOURTH SESSION, 1885-86.*Application for admission to the School, for Prospectuses, or for further information, may be made to the Professors or their Assistants in the Lecture Room or Laboratories, 17 Bloomsbury Square, London, W.C.***THE CENTRAL SCHOOL OF CHEMISTRY AND PHARMACY,**
173 MARYLEBONE ROAD, N.W.

DIRECTOR—Mr. JOHN WOODLAND, F.L.S., F.C.S., &c. DEMONSTRATOR—Mr. J. F. BURNETT, F.C.S., &c.

Day and Evening Classes are held for Minor and Major Students, also Morning Classes for Preliminary Students. A short Course of Lectures and Classes for advanced Minor Students who intend entering at the April Examination will be commenced at the end of February, fee 6 guineas. For Prospectus containing full particulars, apply to Mr. JOHN WOODLAND.

THE LIVERPOOL SCHOOL OF PHARMACY,
36 OXFORD STREET, LIVERPOOL.

Principal—J. S. WARD, M.P.S., Ph. Ch. (Prize Medallist and South Kensington prizeman).

Assisted by Messrs. J. T. HORNLOWER and G. R. LAWRENCE for the Minor pupils, and Mr. PENDLEBURY for the Preliminary pupils.

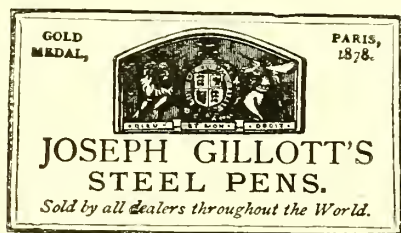
The curriculum of this School is approved of and recommended by the Council of the Liverpool Chemists' Association.

PROSPECTUS, WITH TERMS, ETC., SENT FREE ON APPLICATION.

THE LONDON HOMOEOPATHIC HOSPITAL
AND MEDICAL SCHOOL,
GREAT ORMOND STREET.

A NEW WARD, unoccupied for want of funds, is much needed for Male Patients, and will be opened as soon as sufficient funds to support it are received. The Hospital now contains eighty beds. Trained Nurses are sent out at moderate fees for Medical, Surgical, or Accouchement cases, the latter specially Certificated.

G. A. CROSS, Secretary.

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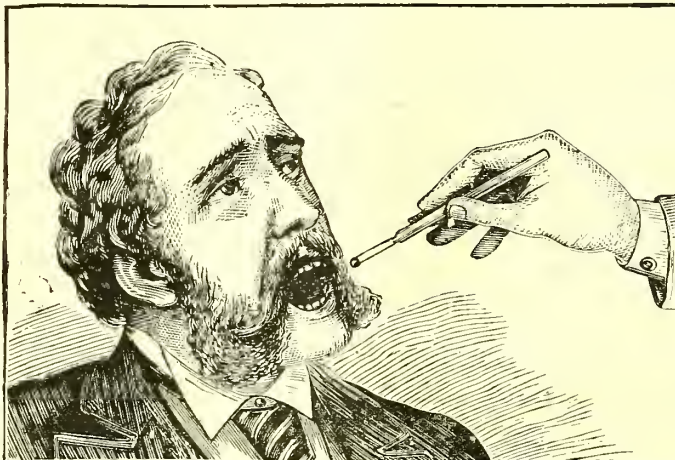
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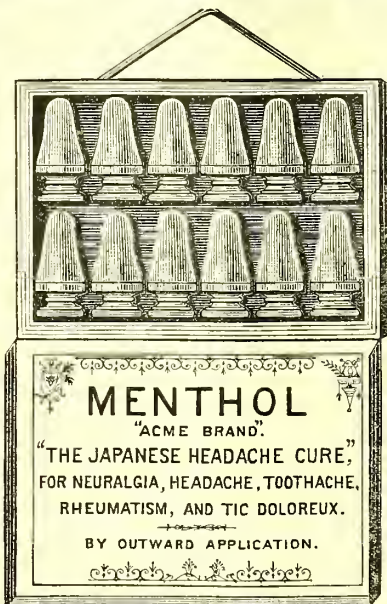
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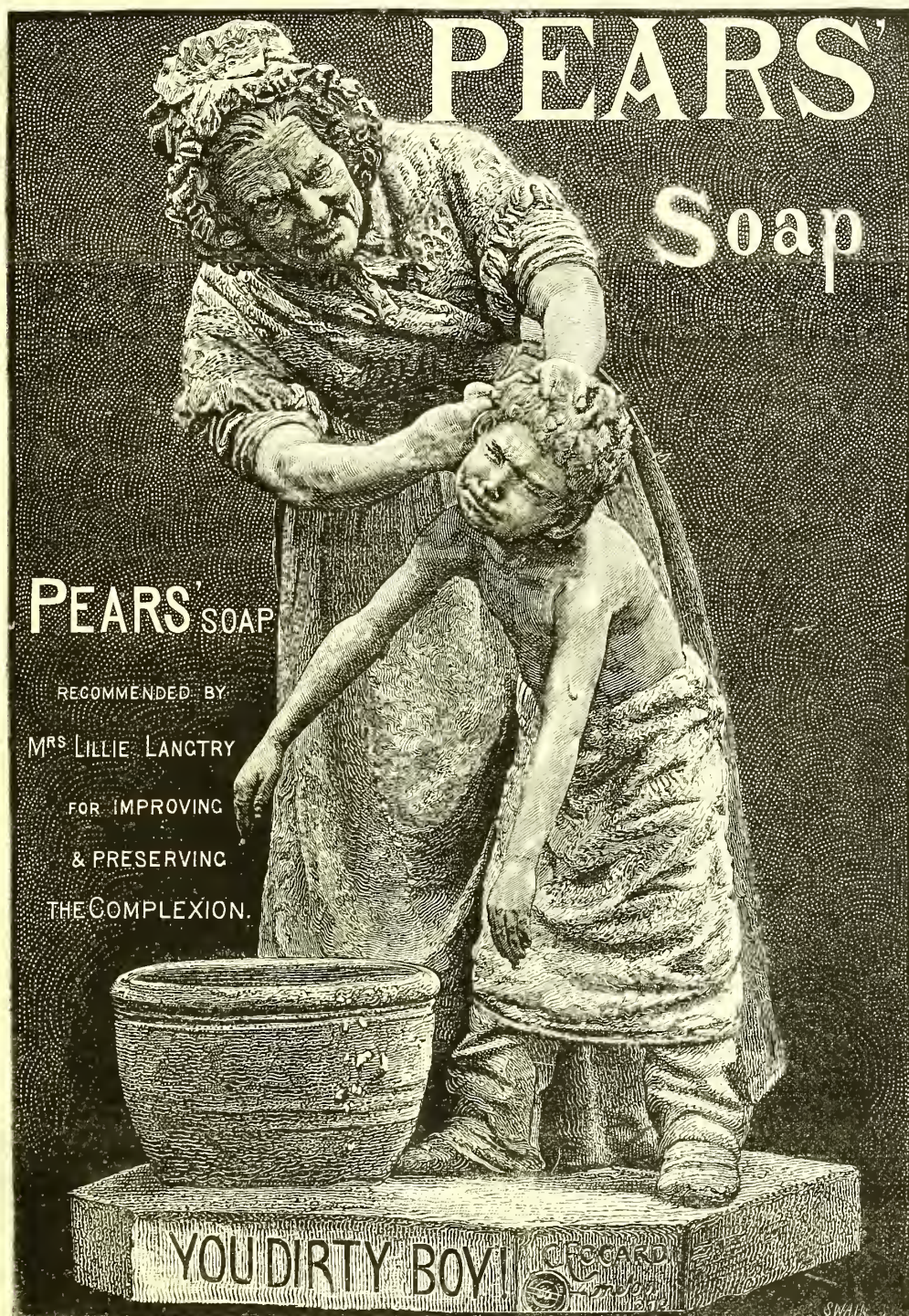
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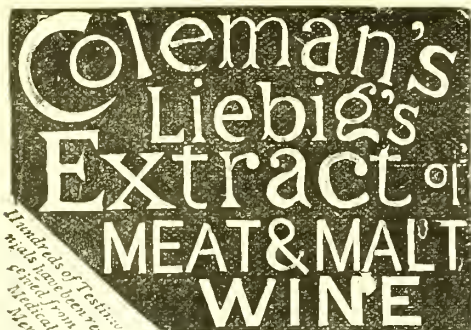
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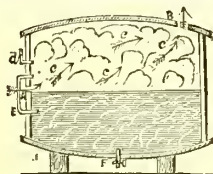
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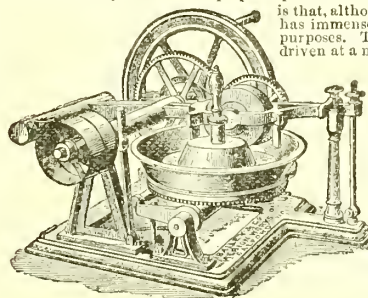
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POWDERS FOR THE ABOVE.

12 Charges	10 Charges
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hand-some la- Boxes.	Boxes.
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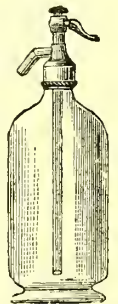
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For Mineral Waters and Gaseous Liquids,
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Ditto, fitted with indiarubber inside ... 10/6 "
Fig. 10. New Bottle Opener, fitted with rubber ... 6/ "

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It will be seen by reference to figs. 6 and 7 that I now form a button or nut under the base of my Stopper for the purpose of easily extracting same from the Bottle without spilling or removing the indiarubber from the body of the Stopper. This is readily accomplished by the use of a suitable tool made to fit on the nut; the Stopper being grasped in withdrawn from the bottle in a second, without injury to the Stopper.

Therefore, it will be a great saving to Mineral Water Manufacturers, as by the old way of extracting the Stoppers from the Bottle, when necessary, very often the indiarubber is spoiled, and the time it takes by this slow process is worth more than the Bottle itself; so that in many instances Bottles with spoiled or dirty Stoppers are put aside as worthless stock.

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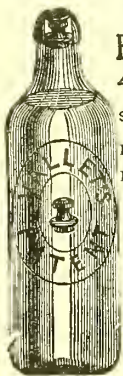


Fig. 3.

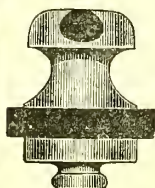


Fig. 6.

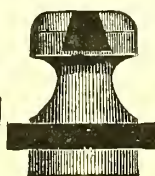


Fig. 1.

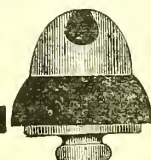


Fig. 7.

SUPPLEMENT TO "THE CHEMIST AND DRUGGIST."

SATURDAY, JULY 10, 1886.

i

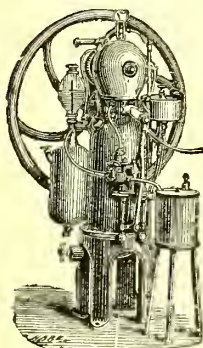
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is guaranteed to make extra sharp Soda Water, and the finest Lemonade, Ginger Beer, Ginger Ale, &c.

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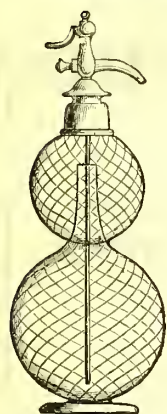
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Telephone Number,
1852.

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CHEMDRUG
LONDON.

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Apollinaris (Hunyadi, Fried-Richard, and Apollinaris)
Barnett and Foster
Bratby and Hinchcliffe
British Syphon Co.
Bush, W. J., and Co. (Foam Producer, &c.)
Chemists' Aerated Waters Association
Ellis (Ruthin)
Favarger, H.
Geraut and Co.
Guerec Fries
Harston & Co.
Hassall and Co. (Citric Acid, Phospho)

Aerated & Mineral Wts & Plant—cont.

Hooper and Co. (Brighton Seltzer)
Ingram and Royle (Mineral and Vichy)
Jewsbury and Brown
La Bourboule
Meadowcroft, W.
Mills and Co. (Bourne)
Schacht, W., and Co. (Kronen-quelle)
Schweppe and Co.
Stevenson and Howell
Taylor, T. and F. J.
Tyler, Hayward, and Co.
Vallet, L. (Bottles)
Younger and Kidley (Temperance Wines)

ACETIC ACID

Dunn and Co.
Lindsey, C. R., and Co.

ALKALOIDS

Howards and Sons (Cinchona)
Smith, J. and H.

ALOIN

Smith, T. and H., and Co.

AMMONIA

May and Baker

APPARATUS

Follows and Bate, Lim.
May, Roberts (Water-bath)
Morgan Crucible Co.
Orme (Scientific)
Pat. Plumbago Co.
Rothermel, Paul (Vinegar)
Wolters Otto (Balances)

AGENCIES ABROAD

Campbell, Neil S. (Colombo)
Cocking (Japan)
Davison, A. (Delphia)
Eisner and Mendelson (Philad.)
Evans, Sons and Mason (Canada)
Felton (Melbourne)
Fougera (New York)
Hormusjee Ruttonjee (Bombay)
Kempthorne (N.W. Zealand)
Leunon (Port Elizabeth)
Mayhew, E. (Weth. Australia)
Phillips and Co. (Bombay)
Prosser, E., and Co. (Sydney)
Roberts (Paris, &c.)
Rocke (Melbourne)
Sharland & Co. (Auckland, N.Z.)
Shirreffs and Co. (Allahabad)
Symes and Co. (Simla)

BANDAGES

Bailey and Son
Bole Hall Mill Co.
Gibbs, Cuxson, and Co.
Hutchinson, A., and Co. ("Heft-band")
Powell and Barstow
Robinson and Sons
Seabury and Johnson

BANK

Birkbeck Bank

BEDS, WATER

Hooper and Co.
Hutchinson, A., and Co. (Sheeting Rubber)

BEESSW & HONEY

Kemp, W., and Son

BATH GLOVES

Pattison, G.

BICARB. SODA

Brunner, Mond and Co.
Gaskell, Deacon and Co.
Howards and Sons
May and Baker

BISMUTH PREP.

Howards and Sons
May and Baker

BOOKS

Dobell, Dr. (Bournemouth)
James, Dr. Prosser (Guide to
New B.P.)
Smith, J. G. ("Aerdt Wtrs")

BOTTLES

Ayrton and Saunders
Barnett and Foster (the
"Eclipse" Stoppered)
Brooks, Peel (Perfumers)
De Luca, G. V.
(Glasgow Apothecaries' Co.)
Harris and Co.
Hearn, Riddle
Isaacs, I., and Co.
Kilner Bros.
Pothe
Simcock, T.
Simcock, W.
Thompson, Millard and Co.
Toogood (Feeding)
Vallet

BOXES

Arundel (Folding Card)
Austin and Co. (Cardboard)
Ayrton and Saunders (Willow)
Banks and Ratcliffe (Soaps, &c.)
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Metz, Paul (Pine and Willow)
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Rogers, J., and Co.
Self-Opening Tin Box Co.
Thompson Norris Manuf. Co.

BROMIDIA

Battle and Co.

BRUSHES

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Dukas and Co.
Gérard, A. (Toilet)
Lynch and Co. (Electric)
Titterton & Howard

BUTTER COLOUR

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Bush, W., Son, and Co. (Mari-
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Meyer and Henckel
Oldfield, Pattinson and Co.

CAMPHOR

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CATALOGUES

Bourne, Johnson, and Latimer
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CEMENT

Boulkes
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CHALK PRECIP.
Dunn and Co.
Levermore and Co.

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Bramwell, E., and Son
Brunner, Mond and Co. (Bicar-
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Bush, W., and Co.
Dunn and Co.
Gaskell, Deacon and Co. (Bi-
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ceutical)
May and Baker
Oldfield, Pattinson and Co.
Sumner, R., and Co.
Sutton and Co. (Volumetric
Analysis)
Tytke and King
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Macfarlan, J. F.
Smith, T. and H.
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Freeman
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COCAINE

Howards and Sons
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Cadbury Bros.
Fry (Malted)
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COFFEE

George and Welch (Dandelion)
Symington (Various Essences)

CORRUPTD PAPER

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Allen and Hanburys
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Beesley, J. E., and Sons (Iodized)
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Jensen's "Iceberg Brand"
Smith, T. J.
Southall Bros. and Barclay (Al)

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Drysdale and Co. (Leo's Chlo.
Potash)
Hooper, B., and Co.
Newbery, F., and Sons

CORN CURES

Clave and Jackson (Celandine)
Harvey's Pencil (Hocklin,
Wilson and Co.)
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Young's

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Morgan Crucible Co.
Pat. Plumbago Co.

DOG MEDICINES

Spratts (Patent) ("Fibrine")

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Thompson and Capper
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Buck, F. (Lessons)
Buck, Dr. C. H. (Mechanical)

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Dinsdale, J. T.
Government Sanitary Co.
Harrison and Co. (Hydrochloric)
Hamilton and Co. (Carbolica)
National Chemical Co.
New Carbolic Sanitary Co.

Rimmel

Sanitas
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Baiss Bros.
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Egans, Lescher and Webb
Hocklin, Wilson and Co.
Lairitz (Pine Wool)

Lynch and Co.
Maw, S., Son and Thompson
May, Roberts and Co.
Newbery, F., and Sons
Schutze and Co.
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Thompson, Millard
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Follows and Bate [(Entrprs.)
Werner and Pfeiderer

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Jamieson and Co.

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Bleber, J. D.

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Bush, W., Son and Co. (Impr.)
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May and Baker
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ETHER

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FORMULE

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Hugo, Brown and Co.
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Stearns, F., and Co.
Thompson, Henry Ayscough,
and Son

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FEEDING BOTTS.

Bourne, Johnson and Co.
Hearn, Riddell and Co.
Kilner Bros.
Lang, J., and J.
May, Roberts and Co.
Richards, Charles (Tube
Cleaner)

Simcock, T.
Thompson, Millard and Co.

FILTERING

Doulton and Co.
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Maignon (Filtre Rapide)
Mawson and Swan
Schwenkner, E., and Co. (Paper)
Silicated Ceru Filtr Co.
The Chamberland-Pasteur
Filter

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Jensen (Peptone)
Nestle, H.
Savory and Moore (Pancreatic)
Wyleys and Co. (Peptonised Milk)
Southall Bros. and Barclay
(Prepared Malt)
Van Abbott (Diabetic)

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Hynam, J.
Rouse and Co.

FUNNELS

Lynch and Co.

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Kimmond
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Rosa and Co.
Schweppe (Dry)
Sumner, R., and Co.

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Kemp and Son

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Price's Candle Co.

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Bush, W., and Co.
Goodell, Jacksonhouse and Co.
Harker, Stagg and Moss
Stearns, F., and Co.

GRINDING MCNS

Bracher and Co.
Follows and Bate
Werner and Pfeiderer

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Cosmaurine
Towle Toilet Cream (Thorn-
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HARNES POLISH

Jamieson and Co.

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Butler, McCulloch
Potter and Clarke

HOMOEOPATHIC

Bristol and W. of England
Epps, James, and Co.
Gilbert, W.
Gould, E., and Son
Keene and Ashwell
Leath and Ross
Thompson and Capper

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British Hop Packing Co.

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London Homeopathic

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Duncan, Flockhart
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Harker, Stagg and Moss (Pdr)
Judson and Son, Lim.
Maw, S., Son, & Thompson
(Insecticide-Vicat)
Radlauer (Moth Paper)
Sandford
Sumner, R., and Co.
Vogt, G.
Woolley & Son (Dalmatian pdr)

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Tyrer, P.
LABELS
Blake and Mackenzie
Bowers Bros.
Ford, Shapland and Co.
Townsend (Exeter)

LANOLINE

Haller and Co.

LARD

Ewen, J.

LEATHER

Shaw, Alexander and John

LITCHES

Butler, McCulloch
Fitch and Nottingham
Potter and Clark

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LIME JUICE
Feltos and Sons (Spécialité)
Montserratt (See Evans)
Riddle and Co. (Stowers)
Ross and Co.

LINSEED

Kemp, W., and Sons
Mumford

LINT

Liverpool Lint Co.
Newsome (Surgeons)
Robinson and Sons
Seabury and Johnson

LOOFARS

Lynch and Co.
Maw, Son and Thompson
Toogood

LOZENGES

Blyton, T. Bage, and Co. (Me-
dicated)
Craven, M. A., and Son
Gibson, R. (Manufacturer)
Kanold's Aperient

MAGNESIA

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Murray, Sir James (Fluid)
Southall Bros. (Liquor)

MALT EXT., ETC.

Pothe (Dr. Linek's)

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Barber, G., and Co. (Crimson)
Christian, J.
Clarke, J. T.
Murphy, J.

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Evans, Lescher and Webb

MENTHOL

A 1 Menthol Depot, J. G.
Shirley, Proprietor
Boehm, J. (Charms)
Christy and Co. (Cones)
Cocking and Co.
Hocklin, Wilson & Co.
Metz, P. ("Acme" cones)
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Dundas, Dick & Co.
Maw, S., Son and Thompson

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Bush, W., and Co.
Howards and Sons
May and Baker
Zimmermann

METALLICCASES, DRUMS, & KEGS

Noakes, B., and Co.

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Burrough, J.
Gibb, L., Smith and Co.
Harvey, J., and W.
McNair and Co.
Phillips G., and Co.

MIXING

Bracher and Co.
Follows and Bate
Sherwin, G. E.
Werner and Pfeiderer

MORPHIA

Macfarlan and Co.
Smith, T. and H.
Wink, J. A., and Co.

MUSE

Symes and Co. (Thibet)

MUSTARD LEAVS.

Metz, Paul

MUSTARD

Finch, Rickman
Johns, J. H. and S. (Ess. Oil)
OILS, PAINTS, &c.
Binghampton Oil Refining Co.
Elvin Bros.
Farmiloe, Geo., and Sons
Follows and Bate (Mill)
Holt, A., and Co.
Joyce, S. C., and Co. (Petroleum, &c.)
Reade, J. R., and Co.

OINTMENT BASES

Boehm, Gus. (Petroleum Jelly)
Chesbrough (Vaseline)
De Pass, E., and Co. (Petrolina)
Evans, Sons & Co. (Foselline)
Grindley (Petroleum Jelly)
Haller and Co. (Lanoline)
Metcalf & Co. (Pure Wool Fat)
Rowlands, G.

PAPAIN

Christy, T., and Co. (Papaine-
Christy)
Kühn, B. (Papain-Finkler)

PAPER (Sanitary)

Mason & Co. (Waxed & Oiled)
Sanitary Paper Co.

PARALDEHYDE

Zimmermann, A. and M.

PATENT MEDCNS

Atkinson (Infant Preserv)
Barclay and Sons (General)
Beecham (Pills)
British College (Morrison's)
Burgess, E. (Lion Ointmt)
Davenport (Chlorodyne)
Edwards and Son
Fennings (Footwear)
Freeman, R. (Chlorodyne)
George and Welch (Liver)
Henry's Indian Remedies
Holloway (Pills and Oint.)
Hop Bitters
Howard (Acid Phosphate)
Howell (Golden Herb Pills)
Kay Bros.
King, Alf. (Hop Bitters)
Lairitz's Pine Wool
Lalor (Phosphodyne, &c.)
Lincoln (Clarke's Mix.)
Leroy, E. B. (Kof Kur)
Munday, J. (Injection Day)
Newbery and Sons
Richards, J. M. (American, &c.)
Roberts (Foreign)
Sanger and Sons
St. Dalms (Bronchial, &c.)
Smith (Antibulious Pills)
Spratts (Locurium Oil)
Stearns' Non-secret
Stedman (Footwear Powders)
Sumner and Co. (Angel's Food)
Thompson, Millard and Co.

PENS

Gillott

PERFUMERY, &c.

[See EAU DE COLOGNE.]
Barclay and Sons
Boehm Gustav (Various)
Briedenbach, Smelling Salts
(Inexhaustible)
Chesbrough Manufacturing Co.
De Pass & Co. (Peach Blossom
Soap)
Ewen (Soaps)
Houbigant (Perfume)
Jackson, J., and Co. (Lavender)
Mann, C. A.
Moutson and Co. (Toilet
Soap, &c.)
Newbery
Pears, A. and F., Soap
Rimmel, E. (Specialities)
Rowland and Son (Various)
Sainsbury, S. (Lav. Water)
Shaw, Alex. and John (Per-
fumery Capping)
West, T. (Okell's Mona)
Woolley, Sons and Co. (Powder)
Wardley and Co.

PEPSINE, &c.

Bullock and Co.
Burroughs, Wellcome
Jensen, C. H.
Keene and Ashwell
Savory and Moore (Pancreatic
Emulsion, Peptonised Milk)
Warner and Co. (Ingluvin)
Zimmermann

PEPPERMINT OIL

Cocking (Japan)
Jackson, J., and Co.
Todd, Albert M.

PEPMT CRYSTALS

Todd, Albert M.

PEROX. OF HYDR.

Dunn and Co.
Robbins

PHOTOGRAPHIC

Houghton, G., and Sons
May and Baker
Newton and Co.
Sellers, J. (Carmines Pur.)
Zimmermann

PILLS (Coated, &c.)

Beecham
Dodd and Co.
Evans, Sons and Co.
Holloway
Howell
"Mc K. & R."
Simpson's Herbal
Smith, W. F.
Warner, W. R. (Coated)
Wyleys and Co. (Gelatin Ovals)

PHARMACEUTICAL PREPARATIONS

Allen and Hanbury's
Baiss Bros.
Barron, Squire and Co.
Battell and Co. (Bromidia)
Burgoyne, Burbidges and Co.
Chevalier, F. (Solubles)
Clay, Dod and Co.
Duncan, Flockhart
Fellows (Hypophosphites)
Fletcher, Fletcher, and Stevenson
Gibson, R. (Lozenges)
Harker, Stagg (Various)
Hewlett and Sons
Hirst, Brooke and Hirst
Howards and Sons
Kay Bros.
Keith (Conc. Tinctures)
Martindale (Nitroglycerine)
Searns (Non-secret)
Wink, J. A., and Co.
Woolley, Sons
Wright, Layman and Umney
Wyleys (Various)

PHOTOGRAPHIC CHEMICALS, &c.**PIG POWDERS****PITCH**

Elvin Bros. (Tar)
Peace, J. R., and Co.

PLASTERS

Gibbs, Cuxon and Co.
Mather, W.
St. Dalmas, A. De
Seabury and Johnson
Taylor, E.
The Felling White Proprietary Co.

PODOPHYLLIN, &c.**POLISHING**

Baumgartner (La Brillantne)
Bradley, Bourdas (Albatur)
Oakley, John, and Sons
Pickering and Sons
Seeger, H. (Pomatum)

PORCELAIN GDS

Bentley (Opal Glass)
Pothe, H., and Co.
Toogood (C.C. Pots, regist)

PORTBLE FURNCS PRINTING

Morgan Crucible Co., The
Blake and Mc Kenzie
Ford, Shandland and Co.
Townsend, J.

QUININE SALTS

Howards and Sons
Zimmermann

RUBBER GOODS

Hutchinson, A., and Co.

SALICINE

Macfarlan and Co.

SALINES

Allen and Hanbury's
Evans, Sons and Co.
Harker, Stagg and Moss

SALT

Hassall, Thos. (Bay)

SANTONIN

Bieber, J. D.

SAUCES

Goodall (Yorkshire Relish)
Lazenby (Harvey's)

SCHOOLS

Central School
Edinburgh Classes
Liverpool School
London Homœopathic
Manchester College
South London School
The School of Pharmacy
Tully, J.
Westminster College

SEALING WAX

Waterston and Sons

SEIDLITZ PWDRS.

Chubb, J., and Co.
Stedman

SELTZOGENES

British Syphon Mfg Co.
Dunfort

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Dunfort

SHEEP DIP

Biggs, T.
Grindley

SOAP (SOFT, &c.)

Chiswick Soap Co.
Mouson and Co. (Cocoa Butter)

SPECTACLES

Darton, F., and Co.
Scott, J. A., and Co.

SPIRIT, PURE AND METHYLATED

Burrough (Pure & Methyl.)
Gibbs, Smith and Co.
Harvey, J. W., and Co.
Jones and Mason (Methyl.)
Macnair, A. (Pure)
Phillips, G., and Co. (Pure)

SPONGE

Cresswell Bros.
Cresswell & Co.
Dukas and Co.
Lynch and Co.
Peterson, M.
Schutze and Co. (Bags)

STAMPS

Clarke (Rubber)
Lindner, M.
London Rubber

STARCH

Critchley (Gloss)
Harrop's Glaze

SURGICAL

Ayrton and Saunders
Bailey, W. H., and Son
Colwell, H. M., and Co.
Gibbs, Cuxon and Co. (Dressings)
Haywood, J. S.
Hodge and Co.
Hooper and Co. (Water Beds)
Jensen, C., and Co. (Pallies)

Syringe)
Lynch and Co.
Manson and Schramm (Elastic Gum)
Marks, A. A. (Artificial Limbs)
Maw, Son and Thompson
Powell and Barstow (Elastic Gum Instruments)
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Manson and Schram

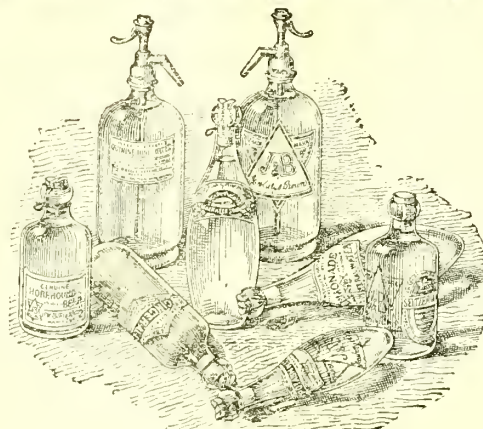
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UNRIVALLED FOR PURITY AND QUALITY.

SODA WATER.
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POTASH WATER.
LITHIA WATER.
SIMPLE
AERATED WATER.



LEMONADE.
GINGER ALE.
QUININE TONIC.
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EXTRACTS FROM ANALYTICAL REPORTS.

"The examination of the Waters which I have made has satisfied me that they have been prepared with the greatest care, and are of excellent quality."

"On the whole, I have no hesitation in stating that your Aerated Waters are of the highest standard of purity which is practically attainable."

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"I took a sample of the water used in your manufactory, in the preparation of the Aerated Waters, and found it, as was the case with the completed compounds entirely free from lead, copper, or any injurious matter whatever."

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LA BOURBOULE,

AN EMINENTLY RESTORATIVE MINERAL WATER.

Contains Chloride of Soda, Bicarbonates, Arsenic (25 millig. of arseniate of soda per litre).

Dose: Half a glass to three glasses per day before or during meals.

A Regenerator for Weakly Children, and for Debility in Adults; also in Anæmia, Fatty Degeneration, Affections of the Skin and Respiratory Organs, and Intermittent Fevers. Employed as a drink and in gargles for Bronchitis and Sore Throat, and as a drink and lotion in Ringworm, Chaps, and Redness of the Skin.

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MANUFACTURERS OF

SODA, POTASH, LITHIA, AND SELTZER WATERS,
LEMONADE, AND AROMATIC GINGER ALE.

4-dozen and 6-dozen Cases Carriage Paid.

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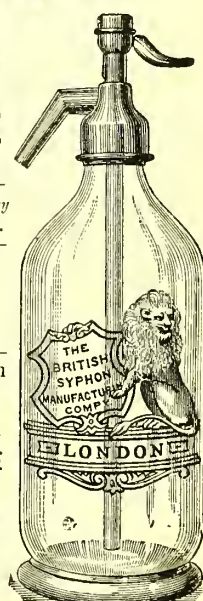
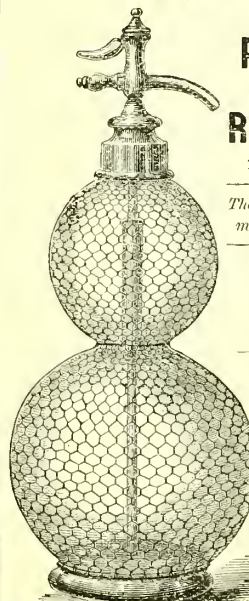
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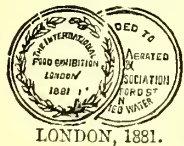
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ONLY PRIZE MEDAL,

**READ**

THE FOLLOWING SELECTIONS FROM

OVER 300 TESTIMONIALS

RECEIVED FROM

*MEDICAL MEN, CHEMISTS, and HOSPITALS respecting the Waters manufactured by***THE CHEMISTS' AERATED & MINERAL WATERS ASSOCIATION, LTD.**From J. THOMPSON, Esq. (Messrs. MAW, SON & THOMPSON),
7 to 12 Aldersgate Street, London, E.C.. . . Both the Soda and the Potash Water are in my opinion excellent.
Signed, J. THOMPSON.From J. CAMERON, Esq., M.D., &c., Medical Officer of Health, Hendon, N.W.
Dear Sir,—Having used and examined the waters prepared by the Chemists' Aerated and Mineral Waters Company, I am of opinion that they are of pure quality, well charged with gas, and, being prepared according to the formula of the British Pharmacopœia, they contain a fixed quantity of various salts, which are useful in the treatment of disease.I am, dear Sir, yours truly,
Signed, JAMES CAMERON, M.D., &c.From A. S. THORBURN, Esq., M.D., L.R.C.S., 7 Catherine St., Strand, W.C.
To the Secretary.Dear Sir,—I have used your waters for some years, and am so perfectly satisfied with the quality, purity, and aëration, that I recommend them with confidence to my patients. I think that your system of making waters up to strength as prescribed by the British Pharmacopœia and stating that fact on bottles, &c., is an excellent one, and one that I have not noticed elsewhere.
(Signed) A. S. THORBURN, M.D., L.R.C.S.From ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN,
Leicester Square, W.C., and Markham Square, S.W.

Dear Sir,—I have much pleasure in answering your question as to the feeling that has been expressed by the authorities of this hospital in reference to the mineral waters supplied by the Chemists' Aerated Waters Association. Allow me to state that we have now used your Association's waters for a considerable time and we have invariably found them as good as good could be; I have not once had any complaint as to them—on the contrary.

Yours truly,

Signed, ST. VINCENT MERCIER, Secretary.

From the NORTH LONDON CONSUMPTION HOSPITAL, Mount Vernon,
Hampstead.

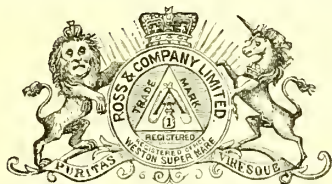
Dear Sir,—I have much pleasure in saying that the aërated waters supplied by your Association to the North London Consumption Hospital for several years were very good in quality and purity.

Yours faithfully,

Signed, W. HORNIBROOK, Secretary.

CONSULTING CHEMIST TO THE ASSOCIATION,

WILLIAM FOSTER, M.A. (Camb.), F.C.S., Fellow of the Institute of Chemistry, Professor of Chemistry at the Middlesex Hospital, &c., &c.

CHEMISTS' AERATED & MINERAL WATERS ASSOCIATION, LTD.,
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SPECIALLY PREPARED FOR THE DISPENSARY.

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Colonial and Foreign orders promptly executed.

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GINGER ALE

DR. ANDREW WILSON, F.R.S.E., Editor of "Health,"

In a Letter dated January 20th, 1886, says:—

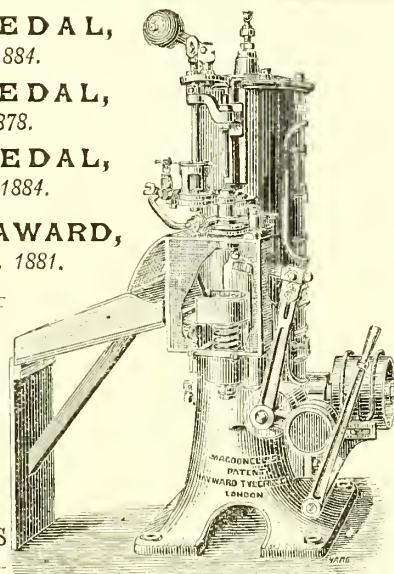
"BINGLEY'S GINGER ALE is unsurpassed for delicacy of flavour, and for its high quality. As a substitute for Alcohol, taken along with food, and as a temperance drink, it has in my opinion no rival."

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Recent
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Machinery for
Aerated Waters**MACDONNEL'S PATENT STEAM BOTTLER.**

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BY ROYAL LETTERS PATENT.

HASSALL & CO.'S PHOSPHO-CITRIC ACID

TO SUPERSEDE CITRIC AND TARTARIC ACIDS FOR AERATED WATERS.

Is recommended by the most eminent Physicians in Great Britain. The Best Houses in the Trade have already adopted it. It is thoroughly beneficial, and far better suited to the requirements of the Mineral Water Trade; it is free from lead and all other minerals and cheap acids; it is fully £6 per cwt. cheaper than Citric Acid.

WE COMPETE ON QUALITY & PRICE.

THE PATENTEES CLAIM FOR IT, AMONGST OTHERS, THE FOLLOWING ADVANTAGES:—

1. That there is no risk of prosecution, and consequent ruin of business, for lead contamination.
2. That it does not deteriorate by exposure, and will retain all its properties any length of time.
3. The price is only 10d. per lb. in 9 and 18 gallon casks; if in smaller quantities, 1s per lb.
4. It is now an established fact that the beverages made with this acid far excel all others in keeping properties, as there is not the fungoid growth that there is with other acids.
5. The Essences retain their strength to a greater degree.
6. A thoroughly clear and pure beverage is obtained, whilst a greater "body" and more fruity character is imparted.
7. Time and labour saved. Being in liquid form, requires only to be measured and added direct.
8. It is entirely free from Sulphuric, Hydrochloric, Nitric, Acetic, or other cheap Acids.
9. It does not affect the metal pipes to the same extent that Citric and Tartaric Acids do.

3-oz. Sample will be sent on receipt of postage (3 stamps), or 14 lbs. will be sent on approbation.

Extract from the "ANALYST," the medium of communication between Public Analysts, for September 1884—

CITRIC and tartaric acids have long been used for acidulating or giving to mineral waters their acid flavouring, but these acids have certain disadvantages, inasmuch as their solutions cannot be kept for any great length of time without the formation of a fungoid growth, and also the extreme difficulty of obtaining them free from lead. A solution has recently been offered to the trade called Phospho-Citric Acid, the properties of which will no doubt interest Analysts. Poisonous metals were entirely absent, and so also were free sulphuric, hydrochloric, nitric, and acetic acids. The solution was clear and colourless. The quantity of phosphoric acid in a small bottle (half-pint) will amount to '95 grain, which I found to be the case in a sample of lemonade made with the above. The flavour and appearance were quite as good as that made with the organic acids. There is no reason why this article should not be used in this highly diluted form as the acid flavouring of lemonade and other mineral waters.

JAMES NAPIER'S REPORT, July 30, 1884.

I examined samples for poisonous metals, especially arsenic, lead, and copper, but could not find the slightest trace. Free sulphuric, hydrochloric, nitric and acetic acids were also absent; indeed, no free acid exists but phosphoric and citric. From analysis and careful examination, I am of opinion that, as an article to supersede tartaric and citric acids in mineral waters, phospho-citric is in many respects superior to those acids. As is well known, it is almost an impossibility to obtain tartaric and citric acids free from lead, so that this article, having no metallic contamination, is purer than those acids. I see no reason why the use of phosphoric acid, in a highly diluted form, will not prove beneficial and be much more superior to tartaric and citric acids. As phosphoric acid is a necessary constituent of the body, whilst tartaric and citric are entirely absent, it is certainly an advantage to use it, as it supplies a very important ingredient to the system and one which is too often obtained in insufficient quantities. The lemonade was entirely free from metallic contamination and fungoid growth, had a bright appearance, was particularly clear, and had a very agreeable flavour. I have no doubt but Phospho-citric Acid will be much used, as it is well suited for its intended purpose, i.e., to supersede citric and tartaric acids in mineral waters.

JAMES NAPIER, F.C.S., F.I.C., Public Analyst, London.

Dr. HASSALL'S REPORT.

The Analytical Sanitary Institution, 54 Holborn Viaduct, E.C., London, June 25, 1884.

Having submitted to analysis a sample of Phospho-citric Acid, we find it to be entirely free from lead and other metallic impurities. Free sulphuric, hydrochloric, and acetic acids were also specially tested for, and found to be absent. The solution was clear, colourless, and, when sufficiently diluted, possessed an agreeable flavour. It is evident from the foregoing particulars that this preparation is well suited to supersede tartaric and citric acids, commonly employed in the manufacture of acidulated and aerated waters; while in its cheapness, freedom from metallic contamination, and in the circumstance that it would tend to preserve beverages made with it for a greater length of time (as there would be less tendency to the development of the fungoid growth frequently observed when the ordinary acids have been used), Phospho-citric Acid offers very considerable advantages.

ARTHUR HILL HASSALL, M.D.,

Author of "Food: its Adulterations and Methods for their Detection."

The above is also confirmed by EDWIN GODWY CLAYTON, F.C.S., &c., &c.

Professor JUSTUS VON LIEBIG,

Equally well known in England and Germany, says: Phosphoric Acid is a never-failing ingredient of all the organised structures of the animal body. The substance of muscular fibre, the fibrine of the blood, the pulmonary tissues, the liver and the kidneys contain an amount of phosphoric acid in chemical combination. The bones of the vertebrata contain more than half their weight of phosphates of lime and magnesia. The substance of the brain and the nerves contain phosphoric acid. The blood contains under all circumstances a certain amount of phosphoric acid.

Dr. WILLIAM B. CARPENTER

Says: Phosphorous exists in combination with albuminoid compounds, and in all animal substances composed of these. The proportions of phosphorus in the brain is considerable, being from 8 to 15 parts in 1,000 of the whole mass, or from 1-20th to 1-30th of the whole solid matter. It seems to be unusually deficient in the brains of idiots.

123 Lonsdale Street West, Melbourne, June 11, 1885.

Gentlemen,—We have tried the Phospho-citric Acid and have much pleasure in pronouncing it a decided success. It is free from any objectionable flavour or taint, and being in liquid form is a great boon, as the time and trouble in weighing and dissolving the other acids is a consideration in the busy time. We consider all aerated-water makers will find it greatly to their advantage to adopt the use of it.—Yours sincerely, R. O'DONNELL & Co.

46 Myddelton Street, London, E.C., August 20, 1885.

Gentlemen,—After fifteen months' continuous use of your acid we have much pleasure in testifying to its excellence. We find it possesses all the properties required by us for our trade, and is at the same time a great saving in time and expense.—Yours respectfully, R. MAYER & SONS.

2, 3, and 4 Rose Lane, London, August 18, 1885.

Gentlemen,—We have now been using your Phospho-citric Acid over fourteen months, and have much pleasure in stating that we like it very much. It is certainly easier to work with than citric and much cheaper. We can find no fault whatever with it.—Yours truly, T. WATTS.

Catherine Street, Strand, May 7, 1885.

Gentlemen,—We have much pleasure in stating we have used your Phospho-citric Acid for several months, and find it a great improvement to the flavour of the lemonade, &c., also about 70s. per cwt. less than citric acid crystals. It is also a great boon in the saving of time, as it is always ready for instant use.—We are, yours respectfully, W. R. LISTER & CLEMOW.

Newcastle-on-Tyne, August 28, 1885.

Gentlemen,—I have now been using your Phospho-citric Acid for a considerable time, and have much pleasure in saying that it is the best and most economical article for the purpose I have met with. In my opinion it is far superior to the ordinary acids, producing a better beverage, and far easier to manipulate.—Yours truly, W. GLENDINNING.

Cathay, Bristol, August 12, 1885.

Gentlemen,—I have used your Phospho-citric Acid daily for the last ten months with a rapidly-increasing business, to the satisfaction of my customers and profit to myself, being only about half the cost of the other acids and ready for instant use; it gives me every satisfaction.—Yours respectfully, C. E. BEAVIS.

3 Sussex Street, Blyth, November 12, 1884.

Gentlemen,—I am happy to inform you that I have tried your Phospho-citric Acid, and I find it quite as good as you represent it to be. It saves labour, and is little above half the price of citric and tartaric acids. The cask I ordered last week is to hand.—I remain, yours respectfully, THOMAS FORSTER.

SCORES OF TESTIMONIALS MAY BE SEEN AT ANY TIME.

Sole Agents for Australia and New Zealand—

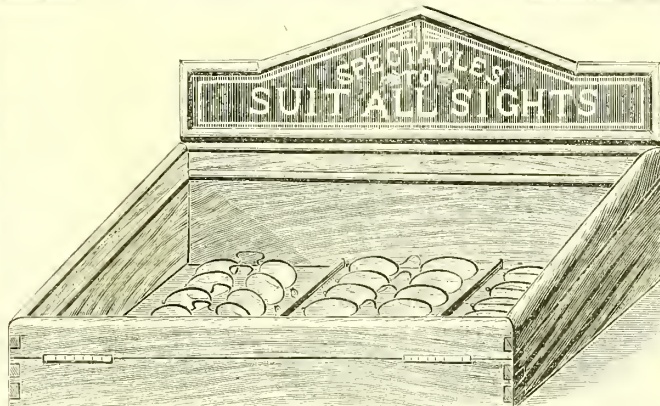
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CHEMISTS commencing the Spectacle business will find these Show Cases arranged with an assortment of Spectacles and Folders of all sights, to meet the requirements of purchasers. The quality and quantity may be varied to suit any class of trade at customer's wish. The Spectacle Show Case is of Solid Polished Mahogany, well made and finished, to stand any climate. A large Coloured Show Card is sent with each case.

THE CHEMIST AND DRUGGIST says:—"The cases are well made, and are quite ornamental, and the spectacles are sold at very moderate wholesale prices, presenting an opportunity for a rate of profit to which chemists are getting unaccustomed."



The following is a summary of the contents of our £2 2s. Case, which bears a profit of 36/-, after paying for Show Case and Sight Tester, for which we allow 15/- if not required.

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2 Dozen Steel Frame Spectacles, Joints, with Screw and Pin	to sell 1/0 per pair	7	0
1 " Ditto, better quality, stout frames, Straw or Blue Steel	" 2/6 "	10	6
1 " Folders, Steel Frames and Placquets	" 1/0 "	5	6
1 " Leather Tuck Spectacle Cases	" 6d. each	2	6
1 " Folder Cases	" 4d. "	1	6
	Show Case and Sight Tester	15	0
		£2	2 0

Our £3 3s. Case contains—

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2 Dozen Steel Frame Spectacles, Joints, with Screw and Pin	to sell 1/0 per pair	7	0
1 " Better quality ditto, Straw or Blue Steel, best White Glasses	" 3/6 "	15	0
1 " Folders, Steel Frames and Placquets	" 1/0 "	5	6
1 " Best Nickel Folders	" 3/6 "	16	0
1 " Spectacle Cases, Leather	" 6d. each	3	0
1 " Folder Cases	" 4d. "	1	6
	Show Case and Sight Tester	15	0
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Larger size Cases, prices £6 6s., £10 10s., or £21.

Send for fully Illustrated Price List and Descriptive Pamphlet, with Table of Sights, post free on receipt of Trade Card.

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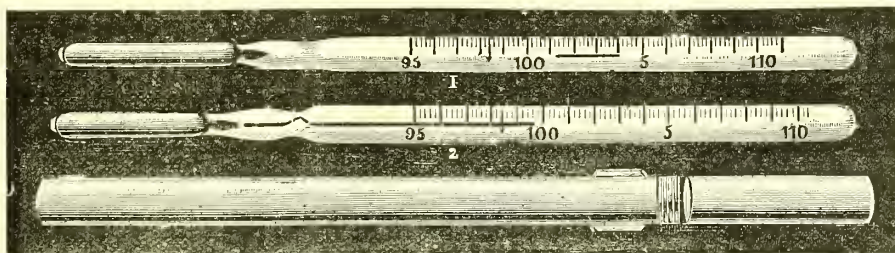
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Ordinary pattern, contracted stem, in German silver cases, 4, 5, or 6 in. 30/ per doz.
Improved broad bore ditto (small bulb), flat and magnifying, ditto 48/ "

A cheap substitute for the lens front form.

Kew Certificates to any of the above 15/ doz. extra. SPECIAL QUOTATIONS FOR QUANTITIES.
Boxwood Scale Thermometers, spirit and mercury tubes, 6/, 7/, 10/, 15/ per doz. Bath Thermometers, in japanned tin case, silvered metal scale, 12/ doz.; enamel tube ditto, 15/; ditto, with porcelain scales, 24/ doz.

Lactometers for Testing Milk, 7/ and 16/ per doz.

Firms ordering Clinical or other Thermometers in quantities of not less than 1 dozen may have their names engraved thereon free of charge.

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„ 5-oz. „ 2/ ...	15/ „	„ 2/ ...	16/ „

The Bottles are put up in Cardboard Cases, the same as "Vaseline" No. 1 and No. 2 sizes.

Also "VASELINE OIL" (Perfumed) for the Hair, 1s. bots., 8s. per doz.

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Proprietors and Sole Manufacturers of the "VASELINE" Preparations.

LANOLINUM PURISS. LIEBREICH.

Messrs. Benno Jaffé & Darmstaedter's New Lanoline Works are now in full working order, and the product manufactured on a larger scale is of greatly improved appearance. *It is of much lighter colour, and almost free from odour; is perfectly neutral, and guaranteed chemically pure. It is now also of suitable consistency for Ointments, and no longer requires the addition of Lard.*

The quality hitherto supplied we are now offering at a Reduced Price for the manufacture of Cosmético preparations.

Please order ORIGINAL 7-lb. Tins.

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Fruit Essences

Soluble Essences of Lemon, Orange, Ginger, &c., &c., for the Aërated Water Trade.

IMPERIAL BOUQUET, a very choice and lasting perfume, price 8s. 6d. per lb.; 8s. in Wr. Qts.

Vegetable Butter Colouring

(AS DANISH).

This preparation is superceding Annatto, Carrots, and all other colorants, and where once tried is always used.

PRICES—

Bulk, 1s. 2d. per lb., 5 per cent. discount.; Bottles, 4s., 8s., 16s. per dozen, 10 per cent. discount.

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Wholesale Druggists & Manufacturing Chemists,

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The Week.

POST-CARD COMPETITION.—No. 5.

WE again offer a prize of one guinea to be competed for by our subscribers and their assistants and apprentices. The subjects of previous competitions have taxed mainly the ingenuity and literary ability of the competitors, and the results have been on the whole interesting. The present competition will help to draw out the business capacities and pharmaceutical skill of the competitors. It will, we trust, bring into the ring those who can neither guess, rhyme, nor search for the hidden jewels of English literature for the adornment of our title-page. What we shall give the guinea for on the present occasion is the best suggestion for a

FAMILY MEDICINE-CASE,

for taking to the seaside or country, when *materfamilias* goes with her children for the annual supply of ozone. The case and contents should not be of less value than half a crown and not more than ten shillings. The idea is that such a medicine case may be stocked by chemists, and brought under the notice of their customers at this season. Mothers frequently want something less formidable than the important mahogany case with white flint squares. We leave to competitors' judgment what they consider likely ailments and accidents which may befall a family of half-a-dozen during a month's sojourn in the country; but we request that they give full particulars regarding the doses, uses, &c., of the contents of the box. Some may be able to do so from stock labels. If designs or specimens of the cases are sent to us they will have our consideration, but we do not stipulate that as an essential. Saturday, July 24, will be the last day for this competition, and we hope that a large number will try their strength.

THE PHARMACEUTICAL COUNCIL put in seven hours' hard work on Wednesday. It was a very hot day, and several of the members appeared to feel it so. Towards afternoon the temperature decreased somewhat, but the discussion thermometer occasionally ran up high to compensate.

REMARKABLE INCIDENTS were not wanting in the proceedings. On several occasions the President, with wonderful alacrity and skill, brought discussions to a close when they were becoming a little troublesome. This is better than putting up the flag.

THE ART OF DIVIDING THE COUNCIL has been lost in Bloomsbury. The dissentients had it almost all their own way on the Journal question, and regarding the sale of cyanides, yet they did not appear to be aware that a vote could have been taken.

MESSRS. ATKINS AND HAMPSON very properly tried to force the Council on the cyanide of potassium question. Our report fully explains the point. It was recognised at the council table that the photographic trade has gone out of the hands of chemists.

THE SCOTTISH DEPUTATION were very well received, and after a temperate statement of their case made a request for a maintenance of use and wont, with concessions regarding the title of the Scottish Executive, and, if absolutely necessary, regarding those of the officers. The four Scottish pharmacists were subjected to a severe cross-examination, which helped to strengthen their case rather than otherwise. The Council were alarmed by the opinion of a Queen's Counsel which was submitted by the Solicitor-General of the deputation.

AT THE MEETING OF THE PARIS PHARMACEUTICAL SOCIETY on Wednesday, the discussion on the purity of quinine raised by M. de Vrij was reopened. M. Jungfleisch has investigated the matter, and agrees with M. de Vrij that the quinines of the market contain from 8 to 12 per cent. of cinchonidine, if not more; that light quinines cannot be pure; and that the French Codex test is the best yet proposed.

FLUORINE is apparently on the point of being isolated. M. Moissan's experiments suggest that hydrofluoric acid can be separated into its elements by means of an electric current passed through the acid in a platinum tube.

THERE IS DEATH IN THE CUP of the mild temperance beverage ginger beer. Dr. Prosslie, of Aberdeen, has recorded several cases of painful gastric irritation and other alarming symptoms from the use of the beer.

DIARY FOR NEXT WEEK.

Tuesday, July 13.

Public sales of cinchona bark at 6 Mineing Lane, at 1 P.M.
Public sales of drysalteries at the Commercial Sale Rooms, at 1 P.M.

Wednesday, July 14.

COLONIAL AND INDIAN EXHIBITION.—Conference on "Tanning materials and leather," in Indian Commercial Rooms, at 3.

SOCIETY OF CHEMICAL INDUSTRY.—Annual General Meeting, University College, Liverpool, at 11. Election of Office-bearers, and Presidential address. *Afternoon*.—Excursions; Evening at 7, Annual Dinner, Adelphi Hotel.

Public sales of spices at the Commercial Sale Rooms, at noon.

Thursday, July 15.

SOCIETY OF CHEMICAL INDUSTRY.—Annual General Meeting. Excursions during day, and at 8 P.M. Conversazioni in Walker Art Gallery and Picton Reading Room.

Public sales of gums at the Commercial Sale Rooms, at 11.30 A.M.

Friday, July 16.

SOCIETY OF CHEMICAL INDUSTRY.—Annual Meeting. Excursions.

SOCIETY OF ARTS.—Conversazione in Colonial and Indian Exhibition.

Colonial and Indian Exhibition Conference on "Food Stuffs," in Indian Commercial Room, at 3.

Saturday, July 17.

Cricket Match at Ben Roberson's, Tufnell Park. Pharmaceutical v. Albert.

Provincial Reports.

BIRMINGHAM.

THE ODONTOBAPH COMPANY.—At the Birmingham Police Court on Tuesday, before the Stipendiary (Mr. Kynnersley), Emil Lelsheldt (29), whose name has lately been associated with the bankrupt proceedings of Mr. Frederick Birch in the Birmingham County Court, was charged with having uttered a forged bill of exchange for 800*l*. Detective-inspector Marshall, from Scotland Yard, was in possession of a warrant issued by Mr. Vaughan, at the Bow Street Police Court, in connection with this charge. The prisoner was handed over to Inspector Marshall.

CLIFTON (BRISTOL.)

PIERCE COMPETITION.—Notwithstanding the short distance and easy means of communication between this fashionable suburb and its mother town Bristol, and the extremely low prices charged by many chemists in the latter place, as noticed in these columns from time to time during the past twelve years, the chemists of Clifton have hitherto maintained fairly good, and yet by no means exorbitant, prices, in spite of the extensive circulation of cutting price-lists by the pioneers of the new system, Hodder, Ferris & Co., &c. It was not until Mr. Keen issued a price-list some three or four months since, that any action was deemed advisable. A meeting of the Cliftonian chemists was summoned and the matter discussed, but no definite action was decided upon, the question being left to each one to do as he thought best. For three months the matter remained in abeyance, when, on July 1, all the trade were startled by the issue of a large four-page tinted card, printed in gold and chocolate, by the well-known and highly respected firm of Giles, Schacht & Co., who "in announcing an important alteration in the conduct of their business, now offer their customers and the public generally the full advantage of the cash system of trading, that is to say, they sell the very finest drugs and medicines it is possible to produce, at prices which compare favourably with those of all competitors. An illustration of the new scale is appended on the card, and may suffice to indicate the firm's desire to meet the call of the times. The excellence of every article used in their dispensing is guaranteed by Giles, Schacht & Co., who will continue to maintain in every department of their business the same scrupulous care which has built up their reputation."

On one side of the card are a few prices of various chemicals at per oz. and $\frac{1}{4}$ -lb., on the other side is a list of some of the leading patents quoted at the following prices:—Cockle's pills, 1*s*. $1\frac{1}{2}$ *d*. for 9*d*.; 2*s*. 9*d*. for 2*s*. Holloway's pills, 1*s*. $1\frac{1}{2}$ *d*. for 9*d*.; 2*s*. 9*d*. for 2*s*. Eno's Fruit Salt, 2*s*. 9*d*. for 2*s*. Hop Bitters, 4*s*. 6*d*. for 3*s*. 3*d*., &c. A slight advance being made where booking is necessitated.

This unexpected action on the part of so important a firm has caused quite a revolution in the trade of the district, and the local press is being extensively used to inform the public that other prominent chemists are not behind the times. Amongst the advertisers are Messrs. G. W. Isaacs & Co., and Mr. R. Keevil; the latter gentleman recognising the changed aspect of modern trade, is desirous of being fully in accord with it. At this point he interposes in his advertisement the stately sentence, "The Cyclical Economical Movements have been world-wide in their manifestations," and then proceeds to announce that all dispensing charges for cash payment will be co-operative or store (Army and Navy) prices.

Now, therefore, pharmaceutical prices throughout the city of Bristol and its close neighbour are at about a dead level.

LIVERPOOL.

NEW PREMISES.—The new Liverpool station of the Lancashire & Yorkshire Railway Company is rapidly approaching completion. The frontage, which is in Titheburn Street, will contain a number of modern shops. Mr. J. Tyrer has taken

the first for a chemist and druggist's business. The great improvement effected in the thoroughfare should make Mr. Tyrer's position a good one.

THE announcement is made that Mr. Alfred Bickerton Evans has been admitted into partnership in the firm of Evans, Sons & Co., wholesale druggists.

LIVERPOOL COLLEGE OF CHEMISTRY.—There is apparently to be no cessation of work during the summer at the Liverpool College of Chemistry in Duke Street. Though the university classes in botany and biology are to keep vacation, the elementary, advanced, and practical classes at the Duke Street College of Chemistry, which began on June 25, will continue open through the summer.

AMONG other special prizes offered by the Committee of the Science Students' Association for work done during the session is one of two guineas in the chemistry section, for the best essay on "Atmospheric Impurities: Their Causes and Means of Prevention."

FAILURE IN THE CHESHIRE SALT TRADE.—The long-continued depression in the Cheshire salt trade is at length making itself more apparent. A petition has been filed in the Nantwich and Crewe County Court on behalf of Josiah Frith, of Chester and Winsford, salt manufacturer. The liabilities, which are mostly unsecured, are over 10,000*l*. The assets, excluding the debtor's household furniture, amount to 370*l*., and there are upwards of a hundred creditors. Depression of trade and unremunerative prices of salt are assigned as the causes of the failure.

NEWPORT.

SAD FATALITY.—A young man named Edward Jones, the son of a retired chemist, living near Caerleon, Newport (Mon.), went with some companions to bathe in the Monmouthshire Canal, near Alteryon. A boat was about to pass from the lock above where deceased was, and the rush of water caused by opening the gate preparatory to the boat passing carried deceased into deep water, and he was drowned. The body was recovered in ten minutes' time, but life was extinct. The deceased was a young man of much promise, and about twenty years of age.

SHEFFIELD.

MR. N. SMITH, late of this town, has purchased a business at Colyton, Devonshire.

AN INQUEST was held on Tuesday on the body of Mary Ann Lloyd, aged 45, who committed suicide by taking laudanum. She had been intemperate, and was in a depressed state of mind. She had asked three of her neighbours to fetch her some laudanum, and they refused, consequently she went herself to the shop of Mr. Bywater and purchased threepennyworth. In three hours afterwards she was found in an unconscious condition, and died a few hours later.

THE STOCK AND FIXTURES of the pharmacist who was the last to make his *début* in this town, have been recently disposed of by auction.

SCIENCE IN THE COUNCIL.—At the last meeting of the Sheffield Town Council, the report of the Medical Officers on the presence of lead in the local water-supply (already referred to) was under discussion. The following occurs in the report of the meeting:—Complaints were expressed as to the cost of these clumsily-compiled reports, which contained a lot of nonsense and advertising rubbish. It was rivalry which produced this, and in proportion to their bulk did they pass for scientific knowledge. A medical member agreed with every word said, and suggested that perhaps the analyst had found lead present in consequence of somebody having dipped the point of his lead pencil in the specimen previous to examination.

THE LOCAL SOCIETY has terminated the session 1885-6, which has been a very successful one. The prizes in the various classes of the School of Pharmacy have been eagerly competed for. The prizes are to be presented to the successful competitors on the occasion of the delivery of the inaugural address in October.

Pharmaceutical Society of Great Britain.

COUNCIL MEETING.

THE Council met on Wednesday, all the members but Mr. Woolley being present.

After the minutes of the former meeting were read and confirmed, the President read a minute of a meeting of the members and associates of the Society residing in Scotland, held in Edinburgh, and already reported in this journal (June 26, p. 621). At that meeting Mr. David Brown Dott was nominated as an examiner, in room of Mr. Baildon. In moving his election to that office, the PRESIDENT said that he had to congratulate the Board in Scotland on this accession to their strength. Mr. Dott was a man whose name was well known in the pharmaceutical world. He had done good work in the past, as scientific literature could show; and on behalf of his colleagues in London, as well as in the North, he could say that they were glad to get his services.

The VICE-PRESIDENT seconded the motion, and it was agreed to unanimously.

A letter was read from Mr. Joseph Bosisto acknowledging the resolution which had been passed in reference to him at last meeting, in which also he expressed the hope that the friendly relations which had always existed between the British and Victorian societies would be maintained.

Mr. Atkins had also sent a letter acknowledging the vote which had been passed in reference to him.

A number of persons were then elected to membership, associateship, and lower grades of the Society, and several were restored.

APPOINTMENTS.—Professors Redwood, Bentley, Attfield, and Dunstan were re-appointed to the respective chairs which they hold in the Society's school.

LOCAL SECRETARIES.—A long list of names was submitted of those whom it was desirable to appoint as local secretaries throughout the kingdom. The list had been drawn up by a committee, and was taken as read. The President so explained, and on his recommendation the members agreed to it, after he had also explained to Mr. Radley that the committee had gone upon old lines on the present occasion, but that the whole subject of local secretaries would be gone into later on.

EXAMINATION SUPERINTENDENTS.—It was moved that the superintendence of written examinations be offered to the local secretaries in the towns where these are held, except in London, Edinburgh, and Guernsey, and that the same centres be adopted as last year.

Mr. RICHARDSON thereupon put in a plea for Leicester, which, he explained, had no superintendent. He had previously advocated this without success. Nottingham had a superintendent, why not Leicester? It was an important town, much more so than Cheltenham and Worcester, which have superintendents. He suggested that these towns should be excluded and the centre changed to Leicester, which was an important educational centre, and was desirous to have a superintendent.

The PRESIDENT said that he was quite conscious that Leicester was an important town, but, as Mr. Richardson had said, there were many important towns round about it, and candidates could go to them. Apart from this, however, he explained that Leicester had previously been removed from the list because there were so few attended there. The matter had been thoroughly considered by the committee, and while they were desirous of paying a compliment to important towns such as Leicester, still, on the basis of previous arrangement, he thought the recommendation should be agreed to. Leicester candidates could go to Nottingham, which was quite near.

Mr. RICHARDSON again said that it was not altogether a question of proximity to a centre, but the necessity of doing justice to a town like Leicester. He thought that Bristol would do for Cheltenham and Worcester candidates.

Mr. WILLIAMS felt that the matter should be left in the hands of the committee to be dealt with along with the question of local secretaries, which was being considered. He did not agree with Mr. Richardson's arguments, and thought it very undesirable to create centres where the

attendance of candidates would necessarily be small. He thought candidates were more successful when there was a fair number of them together than when there were only one or two. Candidates seemed to know this themselves, and preferred to go to large centres. He instanced Brighton as an example of this. There there are very few candidates, and he expected that they all came to London. Perhaps Worcester and other similar places were in a like position.

Dr. SYMES said that Mr. Richardson looked at this question from a different point of view to Mr. Williams. The former appeared to wish a dignity conferred on the town, and what he would ask him was, had there been any complaints at the want of a superintendent? Did any feeling exist, as a matter of fact, that there should be one, or had Mr. Richardson only imagined it? He put these questions because from his own experience candidates came from the North of Wales, a distance of thirty or forty miles, to Liverpool, in order to sit for the examination, and he had never heard them complain.

Mr. RICHARDSON thought these arguments did not apply to his case, and he did not wish a centre in Leicester because of deficient railway facilities or geographical situation. Both were excellent. There were complaints, and he desired to stop them. At this point the PRESIDENT thought he might close the discussion, and he did so by reminding all round the table, particularly Mr. Richardson, that he had a pretty extensive knowledge of examinations in all their details; and his experience induced him to say that there was a tendency on the part of candidates for the Preliminary examination to go to a town where they were not known. He thought this a natural feeling, because they thought that if they failed to pass the superintendent in their own town would be sure to tell others of the fact. This going from one town to another was actually the case, as could very well be proved. Mr. CROSS substantiated this statement from experience of his own employes. The motion was then agreed to.

COUNCIL PRIZE EXAMINATION.—Messrs. Corder and Gale were appointed to conduct this: Messrs. Blunt and Bowen to conduct the JACOB BELL SCHOLARSHIP EXAMINATION; and Mr. Corder to conduct the PETER SQUIRE PRIZE EXAMINATION.

COMMITTEE REPORTS.

FINANCE.—The SECRETARY read the report of the Finance Committee, the more important details of which were referred to by

The PRESIDENT, in moving its adoption. He said that the payments were principally the usual monthly and quarterly ones, but there was a payment of 204l. 10s. 5d. to the solicitor, comprising the first six months of the year. This was unusually high, on account of there being a large number of prosecution cases. In reply to Dr. Symes he explained this payment more fully. There were thirty-two cases, which required frequent appearances in court on the part of the solicitor and barristers. In some of the cases costs on the higher scale had been awarded, and expense was entailed in getting information before prosecution. These cases really cost the Society much more money than was awarded in court as costs; roughly, about 10l. more was expended than was obtained in a 5l. case.

Dr. SYMES recollected one case which had cost over 45l., although only 10l. was awarded as fine and costs.

BENEVOLENT FUND.—Four grants of 10l. each and one of 5l. were recommended. Several cases were still under consideration, and some had not been entertained. Approved on motion of Vice-President.

LIBRARY, MUSEUM, LABORATORY, AND HOUSE.—In addition to the ordinary reports of the Librarian, Curator, and Professors, this report also dealt with the question of prizes to provincial schools of pharmacy, a proposition anent which came from Mr. Martin, Newcastle-on-Tyne, some time ago. It had been carefully considered by the committee, but they thought the time had not yet arrived to take any action in the matter. The committee recommended an addition of 100l. a year to the salary of the curator, Mr. E. M. Holmes, and 20l. a year to Mr. Knapman, the librarian. The resolution which had been adopted by the annual meeting regarding the *Pharmaceutical Journal* had been carefully considered by the committee, who had also

conferred with the Editors of the Journal, and it was recommended that it is not desirable to enlarge or make any alteration of the Journal, but the committee recommended that the *Trade Marks Journal* from the beginning be added to the library. A consultation had taken place between the committee and the professors regarding the courses of lectures at the School of Pharmacy, and it was thought advisable to make some extension of the courses on materia medica, botany, and chemistry; also to institute a course of lectures on pharmacy.

Mr. WILLIAMS thought it rather odd to introduce such an important subject as that relating to the school without previous warning. The subject should not be finally decided upon at this meeting.

The PRESIDENT said it would not; details had yet to be considered, and the whole matter would be discussed in due course. He then commented upon the various matters in the report, and explained the difficulties which there were in the way of adopting Mr. Martin's proposal regarding prizes to provincial schools. He regretted that they could not be given at present, the reason being—to report the explanation briefly—that the Newcastle school is the only one in the kingdom *bona fide* conducted by pharmacists and for pharmaceutical purposes. Consequently in the meantime there cannot be that rivalry which it is desirable to create. When the Society organises more local centres for education, he trusted that they would be able to carry out the suggestion. He thought that Mr. Holmes was entitled to the recognition of his services which the committee recommended. The increase was considerable, but it was not likely to occur every year. Mr. Knapman was also a deserving officer. The resolution regarding the Journal was the result of several hours' discussion. He reminded the Council of the origin of the matter, and said that they were all, no doubt, aware that there were members of the Society who wished the Journal to be rather a newspaper than a journal of pharmacy, while others thought that it should be made even more scientific. Taking everything into consideration the committee came to the conclusion that they should continue to conduct it as was contemplated by the founder, Jacob Bell, namely as a high-class journal of pharmacy. The difficulty which had to be overcome was how to combine that with the elements of a newspaper. There were various commercial matters which had been desired, and the committee considered that as the organ of an important society the same could not be done with the Journal as was done with a proprietary one. The Editor was always willing to receive suggestions as to the conduct of his paper, and he could assure them that they would be carefully and conscientiously considered. In reply to Mr. Hampson, he said that the question of inserting trade-marks had been considered, and it was decided that nothing should be done in that matter further than to place a full copy of the *Trade Marks Journal* in the library for consultation by members. Then, as to minor matters, a desire had been expressed for more foreign correspondence, and that in the meantime had been arranged for and was actually being carried out; but it was felt that foreign journals are now so numerous and so accessible and so frequently published, that very little could be done in that matter more than was done at present. As to the scientific articles which appeared in the Journal, it had been suggested that these should be thinned down, diluted, and made popular; but it was thought not advisable to carry out that proposition. The arrangements regarding the acquirement of the adjoining house-property were then referred to, as also the alterations in the museum, and, speaking regarding the separate course of instruction in pharmacy, the President stated that students who came to the school now showed such evident want of training and knowledge of ordinary pharmaceutical operations that it was really necessary to do something for them in that respect.

Mr. BORLAND suggested that a staff of abstractors should be employed on the journal in the same way as was done by the *Journal of the Chemical Society*.

Mr. CROSS said he was disappointed with the committee's recommendations, and he felt that something could surely be done to obviate a repetition of the complaints which had been made about the Journal being left unopened and unread. Only on the previous day he had experienced the want of force in the frequent recommendation to students to join the Society on account of the Journal, for in ninety-nine cases out

of a hundred it was beyond their grasp. Great interest had been taken in Professor Redwood's lectures, and he could say that during these few weeks back the Journal had really been opened and read. He advocated the introduction of educational notes, and could not help regretting that more was not done for students.

Mr. ATKINS said that this was an exceedingly difficult problem. The committee had had a long discussion with the Editor and Sub-editor, and while they were not desirous to lower the tone so far as the scientific part was concerned, they were anxious to make it more acceptable to young men. He had made a suggestion similar to Mr. Borland's, which he considered an excellent one, that they should have more abstracts of papers on materia medica, chemistry, and pharmacy; but he would have even more, viz., notes on the conditions of our trade—it was really a trade—on the relation between employers and employed, and so on. These were things that one could get to know by travel, but in view of the insular position of pharmacists in this country, it was desirable that such information should come to them by means of the press. It was done elsewhere, and he felt that it might be done to some extent in the Journal.

Mr. RADLEY was also disappointed, and said that he had the feeling that the committee was to do something. He assured his fellow-councillors that a friend of his, a member of the Society, had told him for many years that there was a want of interest about the Journal.

The VICE-PRESIDENT said that there were great difficulties in carrying out all the suggestions which had been made. The Editors were very anxious to receive suggestions to make the Journal more attractive to the readers, and at the same time to keep up the tone. But they did not get support from the complainers, but only complaints. It was felt that the Journal must not descend to catching and interesting literature which referred to trade—that was to say, the amusing part. There were matters which were taken up by trade journals, such as nostrums and other things of purely trade interest, which were very properly gone into elsewhere. But while the Editors were desirous of maintaining the tone of the Journal, they could not enter into these small things.

Dr. SYMES said that this matter had now come fairly before the Council, and the question was, what was to be done? He had listened to the statements by the Editors, and understood from them that, while they were glad to receive suggestions, these were not material for printing, and that was what was wanted. Mr. Borland's suggestion he considered valuable: it was such practical suggestions that were wanted. On the committee's report generally, and particularly regarding the new premises, he asked if there would be room in them for such teaching of practical pharmacy as he had been advocating for some years.

Mr. WILLIAMS said that Mr. Cross spoke of someone who did not read the Journal who condemned it: that man was not an authority. The reason why the Journal was not read he considered to be because they got it for nothing. If they paid for it they would read every word of it.

Mr. BAILDON said that there was disappointment in some quarters regarding the Journal matter. It was a very difficult position; like the social sphere of the pharmacist, it was both commercial and scientific, and, like Mr. Cross, he should like to see the Journal made more interesting to young men. There was another point which he might refer to, namely, the payment for papers. If a young man reads a paper to a provincial association, and sends it to the Journal, he gets no payment, even though it is inserted. There were other journals, however, which did pay, and he considered it a bad thing to have any rule which might encourage papers to go past the Journal.

Mr. ALLEN noticed that those who expressed disappointment had not attended the committee, and he felt that if they had been there they would not have spoken so freely. As to the question of payment, it could not be expected that the Journal would receive articles which have been taken in, perhaps arranged to be paid for before receipt, by other journals, and he considered that any member of the Society ought to feel honoured if he saw his paper appear in the Society's Journal.

Mr. SOUTHALL'S experience was that when the Journal contained reports of pharmaceutical conferences, which generally contained matters of educational interest, it was read, so also when reports of provincial associations were in

it. He had thought of the question about payment of papers, and had asked a young man the other day why he did not send his papers to the *Pharmaceutical Journal* rather than to another paper, and he replied that it was not so much for the fact that this journal paid for the papers, but because the Editor gave him encouragement.

Mr. BAILDON explained, in reply to Mr. Allen, that he knew of cases where papers were sent to the journal he mentioned without any previous bargain as to payment.

Mr. HAMPSON, who had been at the committee meeting, stated that when he was in the presence of the Editor he could not write a prescription for the trouble. There were many causes for complaint, but the chief one, he thought, was in the fact that most of the readers had no market for the matter in the Journal. Doctors did their own dispensing, and consequently when young men got into business they found that much of their knowledge and what was supplied to them by the Journal was no use to them. This could only be mended by a change in the habits of doctors. The commercial element naturally existed in the trade, and it was a question how far that could be aided without lowering the scientific tone of the Journal. He trusted that this inquiry and the discussion would be fruitful, even to the Editor.

Mr. SAVAGE understood that when the question was referred to a committee that some improvement was to be made. It was necessary that there should be, because at present the Journal was not taken out of the wrapper by a great many who received it. He thought that readers would greatly assist the Editor by sending him cuttings from newspapers.

Mr. RICHARDSON said that he wished to say how delighted he was that Mr. Holmes was to get such an increase to his salary, for he richly deserved it. As far as the discussion on the Journal went, he understood that the Editor had gone to the committee and asked to be instructed. This was a new experience to him, and he had some experience of the conducting of journals. He would have thought that the committee ought to have said to the Editor that they wanted him to do more to make the Journal more interesting. It was true it was the most scientific in the country, but they should not be satisfied with that. It should be partially a newspaper, with trade items in it. The Editor had no right to say that they must not pander to the trade. [Sensation, and protests from several members that the Editor had not said so.] Mr. Richardson said he gathered that from the Vice-President, who, however, declared that he had not said so.] Continuing, Mr. Richardson referred to the fact that the annual meeting had passed a resolution on the subject, which was taken up by the Council; and the Council ought to make some attempt to meet those who put forward the motion. What is pharmacy? he said. Speak as you like, it is a trade; and therefore this journal of pharmacy ought to take up trade matters. It would pay, because those who got the Journal would open it and read it right through, and even the advertisements. Mr. Richardson then proceeded, amidst considerable amusement, to make some racy remarks on the long-suffering Editor, who, he said, had lately got an increase of 100*l.* a year, and comes forward and asks what is to be done. Whereas the Emeritus Professor who had lately received a retiring allowance comes forward and tells them that he is to *do* something, and straightway gives a course of lectures, which were highly prized throughout the country. He advocated that the Journal should be enlarged pharmaceutically, and hoped that the Editor would benefit from this discussion. Regarding Mr. Cross's young men, he said that his experience was different. There were young men in his establishment who read the Journal from beginning to end, and were delighted with it. (Laughter.)

Mr. Cross here eased Mr. Richardson's mind on this point, and

Mr. SCHACHT next joined in the discussion. Although admitting that it might be improved he maintained that the Journal held its own very well, and he thought that the critics were open to censure. He could not speak of Continental pharmaceutical journals, but he received seven or eight from America, and these he compared with their own. Except *Ephemeris*, which he characterised as an exceedingly able though extinct periodical, there was none that could be compared with their own. This discussion had been raised by a London member, Mr. Robinson, and that gentleman had expressly stated that their Journal should be made more

interesting with such matters as another well-known trade journal took up. He was rather struck a short time afterwards to find in that journal about half-a-dozen pages of unusual and interesting matter; certainly he had read the whole right through, and was both amused and interested. He might give an example from the pages. It was this:—

Hark! the herald angels sing,
Beecham's pills are just the thing,
Peace on earth and mercy mild,
Two for a man and one for a child.

He had laughed very much indeed when he read that and some other verses. Well, was that the sort of thing the grumblers wanted? If the Editor were to follow that and depart from the legitimate work of what is pharmaceutical, he would lay himself out to more complaints than ever. He considered that the Journal compared very well with other English trade journals, although it might be improved. He approved of the committee's recommendation regarding provincial schools, and thought this matter would come up again when they considered the general question of branches.

Mr. HILLS pointed out that the general feeling regarding the Journal was not one of dissatisfaction. He thought that there were too many grumblers, and too few helpers. All seemed to forget that the Journal was in a sense their own, and made no effort, while advocating improvements, to make any practical suggestion. As to educational matters, he thought that in these days of cheap text-books it was rather hard on a weekly journal to have to descend to giving what could be got in a small book.

The PRESIDENT now said that they had a lot of work before them, and must get on. He had listened to all that had been said, and did not intend to reply. He had some experience in journalistic matters—more, perhaps, than Mr. Richardson, the proprietor of several journals—and all he would say was that the Editor would read the discussion, and profit by it if possible. What the Editor felt was the want of active interest in the Journal. Local secretaries did not give the help they might. If students did not find the paper interesting, it was their own fault; there should be more suggestions and less grumbling. The Journal might cover more ground—he would not say that it should be “more interesting,” for he did not know what that meant. He confessed that he had been staggered by Mr. Robinson's complaint about the paper of “absorbing interest,” but on inquiry he found that that paper was not suited for insertion, although it was interesting to listen to. Summed up, the case was this: that a pharmaceutical journal conducted by a great society like this must be advanced, and must not get mixed up with things which had not a direct bearing on pharmaceutical science. He replied to Dr. Symes on the laboratory question, saying that the new premises were even large enough for the doctor's ideas.

The report was adopted.

GENERAL PURPOSES.—The report of this Committee was received *in camera*. On emerging,

The PRESIDENT moved its adoption. He explained that the Committee recommended that naturalists and other unqualified persons were to be informed by the Secretary that the sale of insect-killing bottles by them was illegal, and pointed out that the bottles contained cyanide of potassium, the vapour from which has the property of killing the insects quickly, and preserves their colour in its pristine beauty. The bottles are not generally labelled, and although the contents would be difficult to swallow *per se*, still, everything considered, they were dangerous, and it was thought right to warn the retailers.

Mr. HAMPSON thought it inconsistent that the Society should interfere in this case and not with the sale of cyanide of potassium itself. The PRESIDENT replied that these sales were *bonâ fide* wholesale, but Mr. WILLIAMS considered that the whole question was very frivolous, and he did not agree with the Committee's recommendation, although he would not divide the Council on the subject. He thought that they laid themselves open to a charge from their scientific brethren of impeding the way of educational progress. He was sure that not 7 lbs. more cyanide per year were sold in this way. Mr. ATKINS was sorry to hear this powerful protest, and agreed with Mr. Hampson's remarks. He knew that young lads could purchase $\frac{1}{2}$ -oz. bottles of cyanide of

potassium from unregistered dealers, while they found it difficult or could not obtain an insect-killing bottle from a legitimate source. Dr. SYMES considered that the larger subject was not before the Council, although it had been spoken of in committee. He was sorry that Mr. Williams persisted in his opinion that the sale of chemicals for technical and scientific purposes should not be confined to chemists. Surely there were enough chemists to supply all that was wanted, and they must not forget that they only were qualified to do so. Mr. ALLEN also spoke, and Mr. ATKINS pointed out that the photographic trade had passed out of the hands of chemists. He explained the case to which he previously referred, and maintained that the Council were bound to go on further in the matter. Two members of the Society had written about insect-killing bottles. Were the Council to wait until people wrote about cyanide before they took action? The PRESIDENT thought it a pity that that remark should have been made. Mr. HAMPSON said the same of the President's remark, and with this the discussion closed, and the report was agreed to.

The Council then adjourned for luncheon. On resuming at 2.30, the PRESIDENT received and introduced to the members a

DEPUTATION FROM SCOTLAND,

consisting of Mr. James Watt, sen., Haddington (convener), Mr. A. Noble, (of Duncan, Flockhart & Co., Edinburgh), Mr. D. Storrar, Kirkcaldy, and Mr. A. Strachan, Aberdeen, who took seats at the Council table.

The PRESIDENT briefly explained the origin of the deputation, gave a *resumé* of the proceedings at the Edinburgh meeting, and read the following resolution passed thereat. Moved by Mr. Mackenzie, seconded by Mr. McGlashan, and unanimously resolved:—

That this meeting has pleasure in complying with the request of the Council of the Pharmaceutical Society to send a deputation representing the members and associates in business resident in Scotland to confer with them, and hereby resolves to appoint such a deputation and instruct it to lay before the Council their special claims in the hope that a settlement may speedily be effected.

The above-named gentlemen were appointed accordingly. The present condition of the question was as stated in the annual report, that an Executive Committee of twenty-one members be selected annually by the members and associates in business of the Society in Scotland, to include the members of Council resident in Scotland. This Committee to report to the Council at least once a year. He would ask the deputation what they had to say on the subject, and would first call upon

Mr. WATT (the convener), who said that he understood that this was a conference, and he was not prepared with a set speech. It afforded his colleagues and himself great pleasure to meet the Council, and they appreciated the compliment in being asked there that day. He reciprocated the President's friendly expressions, and said that they came there as loyal members of the Society to aid the Council in arriving at a satisfactory solution of the difficulty. They were all desirous of showing every respect, admitting as they did that the Council was the supreme executive. No one dissented from that—they admitted it. Their desire was to aid the Council in every legitimate way, and to that end they had drawn up a clear statement of their case and suggestions. He pointed out that they had two positions—their former position before this controversy arose, and their national position. Scotland was not a province; it was a nation. Their former position spoke for itself, in it they had done good work for the Society; and in a national capacity they maintained that they were entitled to unusual consideration from the Council. He would ask Mr. Storrar, who had acted as their secretary, to read the statement which he referred to. The following was then read:—

Statement of deputation appointed by members and associates of the Society resident in Scotland to wait upon the Pharmaceutical Council in reference to the management of the Society's affairs in Scotland. London, July 7, 1886.

(1) For over thirty years the members resident in Scotland have been practically recognised as a branch of the Society, which is shown by the following facts—namely, that the annual reports of the branch have been referred to in, and in some cases incorporated with, the Society's reports; that by the Act of 1852 special examiners for Scotland were directed to be

appointed; that an honorary treasurer and a secretary for Scotland have been annually appointed by the Council; and that the nomination of these officials (examiners, treasurer, and secretary) has been hitherto left in the hands of the branch or its executive.

(2) The management of the North British branch has been entrusted to an executive elected annually by the Scottish members. In the earlier part of its history the executive was called a managing committee and was elected at the annual meetings of the branch, but subsequently the title of "Committee" was changed to that of "Council," and, for the purpose of exciting a wider interest in the Society, the election has for some years been conducted by means of voting papers. This change of title and mode of election has been, if not approved, at least not objected to by the Council of the Society, and their own official, the secretary to the branch, has conducted the election and sent out the voting papers.

(3) The office-bearers of the Scottish executive have, for many years, been known as the President and Vice-President of the North British branch of the Society, have been recognised as such by kindred professional societies in Scotland, and have worthily maintained the dignity and position of the Society on many public occasions.

(4) Neither the office-bearers nor the council of the branch have ever shown any disloyalty to the Society, or claimed independent authority, and we claim for the organisation that it has done much to promote the interests and extension of the Society in Scotland, and that although it was not legalised by the charter or Acts of Parliament, the North British branch is the outcome of an unwritten agreement amongst the founders of the Society. If it has no better foundation, we hold that its claims are founded on equity and use and wont, and if finally abolished will seriously affect the welfare of the Society.

(5) In spite of all this, the privileges hitherto granted to the Scottish members have been withdrawn; the council and office-bearers of the branch have been superseded, and the affairs of the Society in Scotland are now managed by a small committee of the Council. The mere fact that some special management is considered necessary, goes to prove our contention that the membership in Scotland constitutes a branch, and can be best administered as such.

(6) The Council, while holding a North British branch and council to be illegal under the charter of the Society, have recognised the advantages, if not necessity, for a special administration of Scottish affairs, by proposing that it should in future be placed under the charge of a committee nominated and elected by members resident in Scotland, and approved by the Council.

This organisation (on the face of it quite as illegal as the late council of the North British branch) it is proposed to legalise by obtaining the sanction of the Privy Council to a by-law giving, in general terms, power to the Council to appoint committees composed of members outside their own number, for the management of certain of the Society's affairs.

(7) Such a solution of the difficulty the deputation are instructed would not prove satisfactory to the members resident in Scotland, and would greatly weaken the ties which bind them to the Society. While truly loyal to the Society and anxious to preserve its unity, they cannot help feeling that their national sentiments and old associations have been rudely and unnecessarily interfered with, and that an organisation nearly as old as the Society itself has been broken up before any new organisation has been formed to take its place.

They quite recognise that the old organisation which, unchallenged, might have gone on efficiently and prosperously, cannot now be re-instituted without some changes. They also agree with the Council that fuller powers might be delegated to the proposed new governing body, but they at the same time feel that it is due to themselves as well as to the interests of pharmacy in Scotland that some definite recognition of a North British branch should be made, as was undoubtedly the intention of the founders of the Society.

For these reasons the Scottish members cannot agree to the proposed alteration in the by-laws asking general powers, and would not be contented with less than a specific by-law entrusting the management of the Society's affairs in Scotland to an executive nominated and elected by members resident there, but subject to the approval of the Council.

(8) While willing to agree to this course, they are advised on competent legal authority that, under the present charter the Privy Council cannot legally give its consent to a by-law authorising the Pharmaceutical Council to delegate its powers to any body composed of persons outside their own number, and to the deputation this objection appears insuperable.

(9) Assuming a by-law to be unattainable, the only course left to put matters upon a proper footing is through an amendment of the Pharmacy Act. To secure this a considerable time may elapse, as it is not to be supposed that the Council will go into Parliament upon this point only, but will include other points as well, so that really the only action which can be taken at the present time is to formulate a provisional arrangement on lines to be afterwards legalised.

(10) Taking into consideration the whole history of the question, knowing the feeling which exists in their own districts, and acting upon the instructions given them, the members of this deputation are strongly of opinion that no arrangement—whether provisional or permanent—would be satisfactory to the majority of the members and associates resident in Scotland which does not provide—(1) that the new governing body shall

be called "The Executive of the North British Branch of the Pharmaceutical Society of Great Britain"; (2) that the members of Council resident in Scotland shall be "ex-officio" members of the new executive; (3) that the office-bearers of the new executive shall consist of a President and Vice-President, or, if preferred by the Council, a senior and junior Vice-President, elected by, and out of, its own number; and (4) that the Scottish executive shall have restored to it the privilege of nominating the examiners, hon. treasurer, and secretary for Scotland, and shall have a general control over Scotch business, subject to the approval of the Council.

Mr. WATT then resumed his remarks, and wished to confine them to the four proposals which were submitted. Regarding the title "North British Branch," he stated that the obliteration of this meant that the Society's interests in Scotland would be seriously imperilled, and more harm would be done than the Council could imagine. He wished to keep up former association on this point, although he would much prefer for himself the title "Scottish Branch." Still the Society's Scottish interests had grown up under the old title, many of the members had a peculiar attachment to it, and their feelings would be hurt were it removed. Apart from that, he humorously stated that its removal meant that much unnecessary desecration would have to be made in the Edinburgh house before the title was obliterated, such as tearing out windows, removing inscriptions from portraits, books, and the like. This was quite unnecessary, for it was very convenient—convenient to all—to have such a title. They utterly repudiated all idea of being a separate and distinct society. Surely the fact that they had a board of examiners, a treasurer, and a secretary distinct from those here, yet appointed by this Council was a conclusive proof of the position of the Scotch members; and surely a special title was just on the same lines. Regarding the titles President and Vice-President of the branch, he was rather impatient with all that had been said against them. They made no assumption about them, they simply claimed them as local titles, and they did not clash with the imperial titles. He did not wish to discuss the question of local branches, but would take the North British branch *per se*. Personally, he did not care a fig for titles, but as a representative of Scotland he demanded that the old titles should be retained; and why should the Council refuse a thing to those who were persistently loyal? The title of "President of the Branch" was one of local importance. They wished to assume a position of honour and dignity on behalf of the Society amongst the kindred scientific societies in the northern metropolis. But they were desirous of settling the matter, and after consideration were willing to substitute the titles "Senior Vice-President," &c. (as mentioned above), in order to meet the Council. This was the farthest they could go, a little too far, he thought for himself; and, amidst considerable amusement, said that a partnership in Bond Street would be more acceptable to him that day than return to the north. Proceeding, he maintained that the President of the Society, in virtue of his office, was President of the branch, and was so recognised in Scotland on all official visits thereto. The next point was the suggestion that the title "Executive of the North British Branch," rather than "Executive Committee," should be substituted for the old title "Council of the Branch." This he considered a distinct concession on the part of Scotch members, and they wished to recognise the Council in every possible form. Regarding the nomination of examiners by the "executive," he said that this followed the custom of recent years, and it was proposed in order to avoid a difficulty which might occur. Were nominations made by the whole of the members in open meeting, there was nothing to prevent any person from canvassing and so securing a majority of votes. That was not a desirable thing, hence it was for the protection of the Society that they proposed that nomination should be left in the hands of the executive. The question of travelling expenses he only touched upon in order to show that wider representation would be secured. After referring to some other minor points, Mr. Watt rather startled the Council by submitting a legal opinion regarding the procedure of the Council in reference to the by-law for the appointment of committees outside the Council. He had not gone into this question with the desire of embarrassing the Council, but to come to a conclusion on the subject. He might say that it was generally agreed in Scotland that if there were to be a by-law sanctioning the

Scottish "Executive," it must be a specific by-law. He had all along maintained that the Council had no power to appoint committees unless from their own number; there was no authority thereon in the charter and Act of 1852. He had laid the matter before an eminent counsel—a Q.C.—and this was the opinion which he received:—

"The general principle is *delegatus non potest delegare*. Either the proposed by-law seeks to sanction a delegation of the special powers conferred by the charter and statute, or it does not. The dilemma arises that if such a delegation is sought to be made it is illegal and no such by-law or any sanction short of an Act of Parliament can legalise it. If it be not sought to be made, then no such by-law is necessary."

This opinion clearly showed that what they submitted to the Council required no special by-law in the meantime, and they would await under a temporary arrangement until a new Act was obtained. He would not press for generous treatment of Scotland, for by saving it the Council would save themselves. He would be very sorry to go back with the thing unaccomplished, and trusted that the proposals which they submitted would meet with the approval of the whole Council. (Applause.)

The PRESIDENT asked Mr. Watt if the legal opinion did not apply to the "Executive of the North British Branch" equally with the "Executive Committee of the Pharmaceutical Society in Scotland." Mr. WATT replied that it was so in a sense, but the Scottish proposal was for a temporary arrangement, until an amendment of the Act was obtained. The Council's proposal was for a permanent arrangement under a by-law which could not properly be legalised. A long conversation on this point ensued between the President and Mr. Schacht, and Messrs. Watt and Storrar, the result of which was a statement by the Scottish members that they had no objection to see their arrangement legalised by by-law, but they said it could not be done.

Mr. WILLIAMS then said that what the North British branch had done before this controversy, clearly showed the necessity for maintaining it, and gathered from what Mr. Watt had said that the old North British branch was a perfectly legal thing. Mr. SCHACHT said that the by-law which they sought had a wider application than to the North British branch; there were other committees to be appointed. Mr. HAMPSON elicited the information that the Scotch executive never spent money or did anything extraordinary without sanction from the Council, and the President also was informed that of course "North British Branch" meant the adherents of the Society, not the house and official. Dr. SYMES put it that he gathered that both proposals were illegal, but the Scotch members would not object to their own one being adopted.

Mr. STORRAR said, in reply to this, that the Council's proposals were illegal, but they proposed to have powers by Act. The arrangements had existed for thirty years, and they wished them to be continued, to keep up old associations; that was necessary in the interests of the Society. They gave way on the title "Council," and would, if necessary, yield on the title "President." They would not oppose the by-law, as was supposed, unless it was intended to sanction the Scotch arrangement by it; then they might oppose it, because they wished more specific recognition. The point of the legal opinion was that the Council's proposed by-law was illegal. Might he ask the President what his proposals were?

The PRESIDENT: No; for I want you to tell us what yours are.

Mr. STORRAR, replying to Mr. Hampson, also explained what Scottish members wanted—either sanction by Act, or, if that was not necessary, a special by-law.

Mr. BOTTLE asked where the appointment of outside committees was prohibited in the charter. Mr. WATT replied: "Where are they permitted?"

After some further cross-examination,

Mr. NOBLE was called upon to speak. He said that he would simply state a few facts. The pharmacists of Scotland had enjoyed certain titles and position for thirty-five years; if the Council attempted to imperil that position, or to substitute the titles "Chairman" and "Vice-Chairman," their prestige would be gone. He could assure the meeting that it would be serious for the Scottish interests of the Society to break up old associations, as was proposed by the Council. The titles President and Vice-President of the branch were important, and they did not by any means say that their alternative proposal was a proper substitute.

Mr. STRACHAN also spoke, confining himself to the question of getting a new Act, which was much required. He referred to the establishment of branches, and to more grants in aid being made to local associations. This brought a remark from a member, in response to which Mr. Strachan explained that long ago the Aberdeen association had made a successful request for a grant, but the cheque still lay in Bloomsbury unused because of the stipulations which were attached to its acceptance.

After some further remarks,

Mr. WILLIAMS said that he had the privilege of being intimately connected with the society act the birth of the branch, and he could well remember Jacob Bell's visit to Scotland, and when he came back how he mentioned with great pride that they had laid the keystone of the position in insuring that there would be no opposition to the Society in the north, and that chemists there would support them. There was no question *then* about the title "North British Branch." It was given and used with pride, and every specimen, every book, in the Edinburgh house showed that the branch was no local organisation, but part and parcel of the Society. After referring to the amicable turn of affairs and the zealous co-operation which was offered them, Mr. Williams proceeded to say that it would be a good thing to stick to the old title "President of the Branch," and he did not approve of "Senior Vice-President," and so on. [At this stage he was interrupted, and had to resume his seat.]

Following this, for about an hour the members of the deputation were subjected to a thorough heckling from all members of Council, the points raised being chiefly those which have previously been referred to. In the course of this eminently Scotch method of cross-examination there were some very amusing incidents, and there was, too, warm tribute paid to the Scotch members for the way in which they had stated their case. Mr. BOTTLE wanted to know what objections there were to the present small committee, and why there should be an executive in Scotland at all. To this he received the reply that as the Society had a Scotch branch it was consistent with common sense to have a Scotch committee to aid in carrying it on. The PRESIDENT raised the point that it had been or is contemplated to have a Scotch member of the Council as Vice-president of the Society; he would under the proposal be a member of the Scottish executive. In what relation would he stand to the branch officials proper? The same question was raised in a different form by Mr. HILLS. If such circumstances as were mentioned by the President existed, and an invitation came to a public dinner, who would represent the Society—an office-bearer of the branch or of the Council? To this it was replied that the best would be done to maintain the dignity of the Society, and they would not quarrel about who would eat the dinner. A good part of the conversation, too, was taken up with the projected scheme of provincial branches, Mr. SCHACHT being the leader on this point. He seemed to fear that if those were started, the Scotch members might then think that their title was not good enough; whereas the deputation was of opinion that no matter how many branches are started, none of them will ever have the importance of the original and only "North British Branch," and they did not object to that branch being made a pattern for the others. Dr. SYMES humorously asked if the deputation would really not take a little less than they asked; but he was assured that the statement contained the maximum and minimum of their demand.

Thereafter the deputation withdrew for a few minutes, while the Council considered what would be done. On resuming, they were called in, and the PRESIDENT, after asking a question, said that the matter would again come up at next meeting, and the deputation would be informed of the result. Mr. WATT, on behalf of the deputation, thanked the Council for their courteous and kind reception, and hoped that when they met again they would meet as friends.

THE REPORT OF THE LAW AND PARLIAMENTARY COMMITTEE was then read. The most important part of this was a letter from Mr. C. L. Peel, Clerk to the Privy Council, in reply to a letter from the President of date March 13, in reference to the curriculum by-laws. The Privy Council adhered to their decision.

The PRESIDENT, in moving the adoption of the report,

explained this point, and said that these and other by-laws would be recast and presented to the Council in due course.

Mr. SCHACHT could not allow the report to pass without referring to the painful necessity for abandoning a project which they had had in hand so long, and upon which the future of the younger section greatly depended. On both the positions which the Council had taken up they had been defeated, a large portion of the labour of four years was rendered useless—labour which had been heartily gone into by most of them. He had clung to the hope that they would have had help from this section of Her Majesty's Government, but they were defeated all along the line, and he personally regretted this, the worst blow. Until the Imperial Legislature was in a better condition—and they knew as well as he did how slender the hope was for a better condition—they could not hope for a new Act. Perhaps the next generation might get one. Meanwhile, what they should endeavour to do was to get unanimity in their own ranks. The want of unanimity was, he feared, the cause of their defeats, and he was very sorry that opposition was so persistent that it had at last succeeded in flooring them upon a technicality.

Mr. WILLIAMS strongly objected to these remarks, and said that Mr. Schacht ought not to refer to his opponents in that manner. They were as consistent as he was, and he did not see why he should have withheld the expression of his opinion, both in committee and in open Council, simply because it happened to differ from Mr. Schacht's.

Mr. ATKINS was sorry that there was a collision within the camp. He quite agreed with Mr. Schacht, that if they were to go forward they must have unanimity. He wished to record his sense of Mr. Schacht's great labours in this cause, and assured him that the labour was not lost. His only hope was in a new Act.

Mr. SCHACHT explained that he had no intention to hurt Mr. Williams's feelings. He spoke generally in saying that when there was a distinct minority it ought to be loyal. As it was, a small section got the ear of the Privy Council, and the by-laws were rejected. He had not done a single thing outside the Council to further his cause.

Mr. WILLIAMS: Surely you don't say I did.

Mr. SCHACHT: I did not say so.

Mr. BAILDON asked Mr. Schacht if he referred to Scotland, then? There was a memorial from Scotland against the by-law. Mr. Schacht had no right to assume that that proceeded from any other thing than that the memorialists considered that the by-laws went beyond the constitutional powers. But the by-laws were not rejected on account of influence, so much as from the fact that they were unconstitutional.

The PRESIDENT thought it was not profitable to allow this discussion to proceed further, and, after a compliment to Mr. Schacht on his splendid work in endeavouring to advance pharmaceutical education, said that he was not without hope that something might yet be done within the powers which they possessed at present.

CORRESPONDENCE.—Letters were submitted from the secretaries of the Pharmacy Boards of Queensland and Victoria; from the Leicester Pharmaceutical Association, asking a grant in aid [referred to committee]. A letter was also received from Mr. Baden-Benger, stating that he would be compelled to resign his appointment as examiner after the July examinations. The letter was held over until next month.

The Secretary read the results of last month's examinations.

Personalities.

PROF. JAMES DEWAR, F.R.S., has been reappointed Fullerian Professor of Chemistry at the Royal Institution.

MR. A. PEARSON LUFF, B.Sc., has been licensed by the Society of Apothecaries to practise in medicine, surgery, and midwifery.

PROFESSOR O. LIEBREICH, whose name is closely associated with chloral and lanoline, will, it is expected, attend the Brighton meeting of the British Medical Association, and may deliver an address in the section of Pharmacology and Therapeutics.

COLONIAL AND INDIAN EXHIBITION.

(Fourth Notice.)

INDIA.

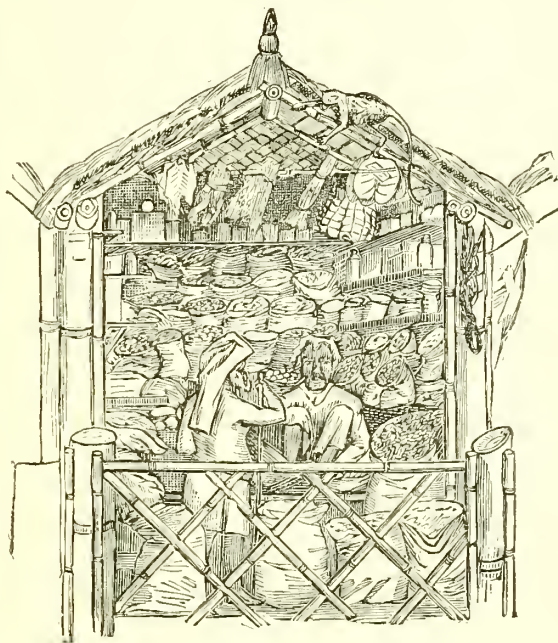
The fact that India alone of all British dependencies has her name directly associated with the exhibition, sufficiently indicates that Indian produce and manufactures are the principal feature of the show. In some other respects also the Indian collections differ from the colonial. In the latter, private enterprise has mainly been at work to place the different colonies in the positions as to merit which they hold in the exhibition, consequently the onlooker obtains a fair idea of the commercial capabilities of our colonists. In the Indian department matters are entirely different, and although private individuals do contribute, as would be expected, the whole arrangements are under the charge of State officials, and in their efforts they are backed up by State aid. The result of this is that the department has a uniformity as to arrangement about it which no other in the exhibition possesses, and yet it is open to question whether this is altogether desirable; but with State officials at the head of affairs it is natural that things should be as they are.

The collections are divided into three divisions, (1) art ware and ornamental fabrics, which are arranged geographically—that is, under each state or province—in the middle court, north court, and smaller courts adjoining; (2) economic products, and agricultural and ethnological exhibits, which occupy the south court, temporarily designated the Imperial Court, and (3) exhibits from the various administrative departments, which in great part are arranged in the south annexe. At present we have mainly to deal with the second division, in which are exhibited drugs as well as other economic products which are of interest to the pharmacist. Here George Watt, Esq., M.B., C.M., F.L.S., of the Bengal Educational Department, has had charge of the arrangements, and since the opening day the court has undergone a transformation, and is now one of the most frequented parts of the whole exhibition, a circumstance due in a great measure to the ethnological exhibits. From the fact that the special catalogue of the exhibits is not yet printed, and also from the fact that labelling has practically not begun, we are not in a position to give our readers more than a general idea of the exhibits in the court. Entering through the forest trophy (the magnificent archway to which we have previously referred, and which contains 3,000 specimens of useful timbers, most of which have been lent by the Government of Bengal), the visitor will find most of the drugs towards the left. There is a very handsome table here made from the wood of *Pterocarpus indicus*, which grows abundantly and to gigantic proportions in the Andaman and Nicobar Islands. The top of this table is at least six feet in diameter, and consists of one slab of wood. Evidently to show that there is no deception, another slab of the wood stands beside it, as cut from the tree, and polished on one side. Close by there is a much smaller exhibit, but proportionately of no less interest. It is a cross section of an exceptionally large stem of *Dodonaea viscosa* from the Rawalpindi forest. The section is about a foot in diameter, and is deeply cut into segments. The exhibit of drugs is practically in the same condition as it was a month ago. The principal portion, comprising the Index Collection, is arranged on the south wall in tin glazed boxes, which appear to have done duty elsewhere, if we may judge from their well-worn condition. There are close upon five hundred specimens shown in these boxes, and, at present, one of them, *Abrus precatorius*, bears a label; the rest, it is expected, will very shortly be made intelligible to those who are not specialists.

THE DRUGGIST'S SHOP.

We give here a sketch of the medicine-booth to which we have previously referred. Our artist has caught the most prominent parts of the shop, even to the monkey, who is slyly endeavouring to become a customer for one of the more pleasant drugs. Round the old druggist we observe some familiar as well as some odd remedies. A bundle of dried flat fish hangs from the roof close beside bundles of herbs, and several pieces of the nests of the Termite ant balance it

on the other side. The ceiling, like those of cottages of the last generation, is largely taken advantage of; straw baskets, boxes of various kinds, and bamboo stems are suspended in quaint disorder. If we may judge from the drugs which are shown in the booth, carminatives and bitter medicines form the greater and more important part of an Indian physic shop. Cinnamon leaves, turmeric, ginger, capsicum, long pepper, and an indifferent specimen of orange peel are prominent members of the former class; and amongst the latter, chiretta, the yellow root of *Coscinium fenestratum*,



bael fruit, whole and in slices, and barks in profusion are noticeable. Amongst curiosities in the booth we noticed tiger's fat, a whole pickle-bottleful of this unique and difficult-to-get medicament being shown. There are also several packets, Mount-Lebanon-like packets they are, of *Lobelia inflata*. What the purpose is of exhibiting these it is hard to say, considering that this species of lobelia is not indigenous to India, *Lobelia nicotianifolia* being the plant which is found in native bazaars.

OILS.

In another part of the court there is an excellent exhibit of fixed and essential oils and attars. The latter are exhibited by Dr. Kanny Loll Dey, of Calcutta, who is well known in the pharmaceutical world for his contributions on Indian materia medica. Thirty-five attars are exhibited, and about 150 essential and fixed oils. Illustrative of these is a small model of a medicinal plant farm, showing how the ground is tilled, and the plants cared for.

In a recent number of this journal (page 197) we referred to the fact that sandal-wood oil is the basis of Indian attars. In consequence of this they have all a more or less pronounced odour of sandal-wood, according as the specific odour of the plant used for an attar is powerful or otherwise; but even the rose fails to impart the fulness of its fragrance to the basis. The taste for sandal-wood odour is one which requires to be cultivated, yet it is the fact that it is the favourite perfume of the East. Dr. Kanny Loll Dey's collection, small in bulk though it may be, is a unique and valuable exhibit. It has already met with an accident, and for that reason we would suggest that it be moved to a place of safety. The fixed and essential oils are also an excellent collection, and are better exhibited than Indian oils usually are. India is very rich in oil-producing plants, but with the exception of castor, cocoa-nut, gingelly, and some other oils, it cannot be said that they have been hitherto produced in commercial quantities for export, although we receive large supplies of oil-seeds—such as cotton-seed and linseed—from India. Since the beginning of the present decade, exports

have increased enormously, and in 1884-85 the actual export of oil seeds attained a value of 10,745,203*l.*, of which linseed is put down for 4,192,934*l.*, rapeseed 2,683,590*l.*, sesame or gingelly 1,923,002*l.*, poppy 409,159*l.*, arachis, or earth-nuts, 361,406*l.*, and castor-seeds at 2,103,379*l.* Of prepared oils castor-oil is the most important, and has nearly driven the Italian oil out of the market. The annual export of this is now valued at about 300,000*l.* A very large proportion of this is not used in medicine at all. It is generally imported in jute ships as a kind of packing, and, curiously, much of it is destined to be used in jute spinning for treating the fibre as well as for lubricating machinery. Two samples of the oil are included in the collection, one a fine pale oil, such as is used in medicine, the other a brown oil, better adapted for the rougher work referred to. Cocoa-nut oil is also largely exported—162,000*l.* was the value of the million and a half gallons exported in 1884-85 to Great Britain and France. Brassica species furnish about a dozen specimens of yellow fixed oils; the white mustard and rape oils are obtained from varieties of *B. campestris*, viz., *var. dichotoma*, *var. glauca*, and *var. toria*. Brown mustard, *B. juncea*, yields an oil somewhat similar, but of slightly greater pungency. These oils differ greatly from the brown oil which is manufactured in this country. The natives of India use mustard oil for culinary purposes, largely as a lubricant to the skin, and also as a mild rubefacient for rheumatic joints, and, as we use camphorated oil, for simple colds. Some years ago the oil was introduced in this country for the latter purposes, but there has always been some doubt as to what should be supplied. Certainly it is not the *oleum sinapis essentialis*, and the brown oil manufactured in this country possesses next to no rubefacient properties. It is the oil of *Brassica juncea* which should be used. Three kinds of mahwah oil are shown, obtained from the seeds of two different varieties of *Bassia latifolia*. Mahwah oil is of a buttery consistence, of a yellow colour, and is largely used in India for soap-making. At one time it was hoped that it would be largely exported to this country for the same purpose, but it appears that it has never secured a footing. There are also specimens of liquid oil. The allied sapotaceous plant *Mimusops elengi* also yields a seed-oil, of which a specimen is shown. There is a curious oil from the seeds of *Mesua ferrea*; it is a thick, dark-brown oil, somewhat empyreumatic, and almost ferruginous in appearance. It is employed as an embrocation in rheumatism. The seeds of *Holarrhena antidysenterica* yield a very rich red oil, a sample of which is shown. A green oil from *Hyoscyamus niger* is also to be noticed; it is doubtful whether this oil is the seed-oil or not; the oil obtained by infusion of the leaves in a fixed oil is green, and is a favourite Continental remedy. It would be curious were a similar oil employed in India. There is also some doubt as to Indian henbane being *H. niger*. Two kinds of deodar (*Cedrus Deodara*, Indian cedar) oil are shown, one the dark empyreumatic oil, the other a lighter coloured and thickish turpentine. There are also two specimens of oils obtained from *Pinus longifolia*, one, the oil distilled from the oleo-resin, is yellowish in colour, and may be employed as a substitute for turpentine; the other resembles huile de cade, and is obtained from the bark by destructive distillation. Both of these empyreumatic oils are used in India for skin diseases, and are worthy of trial in this country. Amongst the fixed oils are also those of *Nigella sativa*, *Odontospis americana* (shark oil), *Hydnocarpus indicus*, *Cucurbitus Pepo*, *Cucumis sativus*, *Abies Smithiana*, *Carthamus trictorius*, *Cuminum Cuminum*, *Guizotia abyssinica*, *Matricaria Chamomilla*, &c., and amongst essential oils there are *Myristica moschata*, *Mentha sativa*, *Piper Cubeba*, *Illicium anisatum*, *Melaleuca leucadendron*, *Ptychotis Ajoan*, &c. This collection is one of the most complete which has ever been exhibited in this country, and as many of the oils have not yet been chemically examined, an opportunity is afforded of extending our knowledge regarding them. But it is a matter of regret that the oils are directly exposed to the solar heat, and on that account are rapidly rancidifying, so that it is not possible to judge accurately of their neutrality.

OPIMUM.

With a revenue close upon 10,000,000*l.* a year derived from this drug the Indian Government are well situated for exhibiting the produce of the poppy. The case which is devoted to opium contains an excellent assortment of speci-

mens, showing the method of production; also opium-smoking pipes and other implements which are highly interesting to the public as well as to pharmacists. It is a matter of regret that each specimen does not have a descriptive label; the consequence is that spectators make rough guesses as to what the black-looking stuff is, and inexperienced ladies imagine that the pipes are hookahs, and so on; 10,000,000*l.* a year could surely afford 10*s.* for a set of labels. Elsewhere in the court an amateur printer has succeeded in producing some intelligible labels with a cheap set of indiarubber type, and it is a pity that his example has not been followed by others. The specimens in the opium case are very well put up, and considerable pains have been taken to show them off to the greatest advantage. Pharmaceutical visitors may use the following list when they inspect the specimens. A1 is crude opium; A2 the same in powder; A3 is a ball, or "cake," of provision opium, such as is exported to China; A4 and A5 are also specimens of the same opium, the latter showing the thick coating of poppy leaves and "trash"; A6 is *lérá*, and A7 *pasérá*. The latter is the more liquid portion of the poppy juice, and the former is a mixture of it and opium. *Lérá* is used as an adhesive agent in coating the opium with poppy leaves. A8 is a specimen of Benares opium, showing the excise stamp upon the flat square cake. This opium is not enveloped in a leaf-covering. The Abkari cake is similar; this is the kind which is prepared for home consumption in India. A10 and A11 will be recognised as the seed and oil of the poppy; and B1 and B4 as the leaves and "trash" used to wrap round the opium, there being three specimens of the "trash," unclean and clean. B5 shows crude Malwa opium; B6 the same inspissated to a lump and ready for caking; and B7 formed into an Abkari cake, which is smaller than the Benares cake. B9 and B8 are white linseed, and oil obtained from it, which is used to anoint the knife employed by juice collectors, and the presence of which in the opium gives it its oleaceous appearance. Malwa opium is the kind used exclusively in Western India. The collection and preparation of opium are so well known that they need not be described here. The specimens figured under C are salts of morphia and other opium alkaloids; they help to give completeness to the collection, but otherwise call for no comment, as they are but indifferent specimens. The rest of the case is devoted to opium-smokers' implements. First may be noticed a small balance on the unequal-arm principle. The beam is of ivory, neatly graduated, and the scale-pan of brass. The weight is a sliding one, made of brass. There are several pipes, some of which are highly ornamented, and two are covered with embroidered velvet. Two kinds of lamps are shown, one of handsome cut glass, and the others rude tin lamps. In addition to these there are the metal rods with which the smoker manipulates the pellet of opium before igniting and placing it in the pipe; a pillow made of wood covered with leather, just large enough to fit into the nape of the neck. There are also some minor accessories. Altogether, this is a very interesting and unpretentious exhibit.

LAC PRODUCTS.

The manufacture of various products from lac may be considered one of India's important industries, the exports amounting to close upon 600,000*l.* in value. The industry is followed all over India, and a large collection of specimens has been sent for exhibition. These have been arranged so as to show a sort of natural and artificial sequence. First we have branches of leaves of the Palas-tree (*Butea frondosa*), Papul-tree (*Ficus religiosa*), Pakur tree (*Arca catechu*), and some others with deposits of lac upon them, as produced by the insect *Coccus lacca*.

Stick-lac is simply the resinous substance as taken from the branches. In this state it contains about a tenth of colouring-matter, and somewhat more refuse, the rest being resin. The first operation which the substance undergoes is grinding, then washing with water to dissolve out the colouring-matter. Specimens of lac before and after these operations are shown. The washings are strained, and by treating with lime-water lac-dye is precipitated, is collected, freed from as much water as possible by pressure, then dried. This product is a valuable and very permanent red dye, which was at one time exclusively used in India for dyeing red shades, but latterly it has been almost entirely replaced by aniline colours. The removal of colouring-matter by washing changes the lac from a garnet to an amber colour; after drying it is sifted, and the coarser

portion placed in a long and narrow calico bag, resembling a sausage, a specimen of which is shown. This is then heated over a fire until the resin begins to ooze out, and quite covers the surface of the bag; when this stage is reached the operator transfers part of the melted resin to a bamboo containing warm sand, it is rapidly spread over the bamboo and as quickly removed from it in the form of flaky shellac. The exhibition collection contains some excellent specimens of shellac, button lac, seedlac, &c. The most transparent and lighter coloured varieties of the former are obtained from Kutku lac, that obtained from Bysaku lac is somewhat inferior. The specimens are of various qualities, and may best be judged of by inspection. There are also contained in the case fine specimens of garnet lac; the refuse in thin cakes and in cheese-like masses which have the external appearance of balata; also specimens of lac goods, prepared from the pulverulent refuse.

CINCHONA.

In spite of the big statements made by the daily papers as to the exhibits under this heading, we think that the respective governments in India who cultivate cinchona have signally failed to do themselves justice. The exhibit is packed in an area of about 6 feet square; the Madras Government exhibit is neatly arranged, but that from the Bengal Presidency is still lying uncared for on the floor. The Madras exhibit is contained in and upon a roof-shaped glass case, which has four supports made of different cinchona stems, each of which shows the result of different methods of harvesting. Of other stems shown the following are more particularly interesting:—

C. Humboldtiana, var. *crispa*, with renewed bark, which is rough, spongy, and corky-like on the outside.

C. succirubra. One stem shows what careless stripping does, the wood being split up, poor looking, and rendered utterly useless. There are several specimens of *succirubra* stems; one has a diameter of $8\frac{1}{2}$ inches, and shows the exterior with strips of bark removed from it and renewed under moss. A younger stem is also shown with the bark removed but not renewed. Various specimens of bark, quilled and in other conditions, are shown, and inside the case are herbarium specimens of the following, grown at British Sikkim:—

1. *C. Ledgeriana*, best variety, with a leaf measuring 5 inches by $2\frac{3}{4}$ inches, and a small oval fruit, grown at an altitude of 2,000 feet.

2. The same, purple-leaved variety, which has a larger fruit and a narrower and smaller leaf ($3\frac{1}{2}$ inches by $1\frac{1}{2}$ inch).

3. *C. officinalis*, grown at an altitude of 4,000 feet.

4. *C. succirubra*, 3,500 feet. A comparison of 3 and 4 will show the marked difference between these species, the latter has a characteristic, large, almost circular, leaf (about $6\frac{1}{2}$ inches by 5 inches). The flowers and fruits also differ. In contrast with these may be examined

5. *C. hybrida*, a cross between *C. officinalis* and *C. succirubra*, which has some of the characteristics of the parents. The bark which this tree yields is a good one, as may be judged by the following analysis:—

Crystallised quinine sulphate	..	6.12 per cent.
" cinchonidine sulphate	2.46	"
" cinchonine	..	0.55 "

6. *C. micrantha* has a large leaf (7 inches by 3 inches) and a characteristic flower. The bark is finely mossed, dark brown in colour, and abundantly warted.

Two pieces of stem are exhibited which show how the insect called "the borer" enters the stem and eats its way down through the pith, thereby injuriously affecting the tree.

Messrs. Parry & Co., of Chunambady, Wynaad, South India, contribute their share to the cinchona exhibit, and to their credit it may be said that they display in more handsome style than the Government. They show part of the stem of a *C. succirubra*, which was felled when it was sixteen years old, and had then a girth of 5 feet at the base and was 40 feet high. It yielded 85 lbs. of excellent bark, a specimen of which in yard-long handsome druggists' quill is shown. The firm exhibits through their agents, Messrs. T. H. Allan & Co., 17 Gracechurch Street, E.C.

MISCELLANEOUS EXHIBITS.

In the Imperial Court there is a very extensive and varied show of condiments by a number of native and other firms. Chutneys, curries, and peppers make up the bulk of exhibits, as may be gathered from our notes.

Morwangle, Poonjiagee & Son, Bombay, have a very effective show, in which sweet Lucknow chutney, Cashmere chutney, green Mango chutney, and Nepaul pepper are prominent.

Monockjee Poonjiagee, Bombay, shows various kinds of curry, pickles, pastes, curry pastes, &c. These are handsomely bottled.

Sveekissen Dutt, Calcutta, has a small exhibit in the same class.

The Madras Medical Hall have a very varied and tasteful collection of condiments, amongst which we notice lime and fish pickles, sweet mango and lime chutneys. The other exhibits in this case are by Muncherjee Manockjee Poonjiagee, Bombay, and C. Kirtnasawny Chutty & Sons, Bombay. The former has a varied exhibit of condiments, and the latter confine themselves to chutneys. This case also contains several specimens of preserved fruits by various exhibitors, including the Dorian fruit, a large pine-apple-like fruit, the fruit of *Eugenia opercula*, and various specimens of *Ficus*, but at present these are not effectively shown. Close by The Great Eastern Hotel Wine and Preserving Company, Calcutta, have an excellent exhibit, which is well displayed, of chutneys, curries (in powder and paste), and other condiments. The palm for effectiveness of display in this department may be given to P. Venkatachellunni, of Madras, who has a large and handsome case and a smaller one devoted to the appetising compounds. In addition to those which have already been named, this exhibit includes several kinds of bamboo pickles and Nepaul and other peppers. The preparations are neatly put up, and are well arranged in the cases. Beside this we noticed an exhibit of Foster's Food for Cattle, which finds a place in the court from the fact that Indian spices enter into its composition. Amongst minor exhibits in the court may be noticed rectified spirit, prepared by Alamuty & Co., Albion Distillery, Calcutta, from Mahwah flowers (*Bassia latifolia*). These flowers are largely used in the manufacture of spirituous liquors. They contain a large percentage of grape sugar and a smaller proportion of cane sugar. A recent examination of them by Mr. Church shows that the manufacture of sugar from them is impracticable. The supply of the flowers is enormous. H. H. Abdullah, Collootallah, Calcutta, exhibits his "Celebrated Indian Arrowroot," samples of which may be obtained. The arrowroot is of very good quality. There are other objects of interest in the court, such as the indigo collections and the collections of soils which deserve inspection, and will be afterwards referred to here.

Metropolitan Reports.

THE ANNUAL EXCURSION of the employés of Messrs. Evans, Lescher & Webb, Bartholomew Close, E.C., was held last Saturday, the place selected being East Molesey, and the headquarters the Prince of Wales's Hotel. The majority of the company arrived by the early train and took the opportunity of visiting Hampton Court Palace, boating on the river, and otherwise filling in the time enjoyably until 2 o'clock, when all assembled in the hotel and did full justice to an excellent dinner. Mr. F. Whittaker occupied the chair, and Mr. T. H. Smith acted as vice-chairman. After the cloth was removed the usual loyal and patriotic toasts were submitted and responded to with great enthusiasm, as was also the toast "Prosperity to the Firm." Mr. Owen, the chairman, and Mr. Podmore gave some excellent songs. Altogether the excursion was most enjoyable, both as regards arrangements, company, and weather.

LECTURES ON GALENIC PHARMACY BY EMERITUS
PROFESSOR REDWOOD.

LECTURE VI.

Pharmacopœia Acetic Preparations.

HITHERTO we have been considering the extraction of the active constituents of drugs chiefly by means of water, and I find that, though I have reached the limit of time which I had originally proposed, I have been compelled to leave much unsaid. In point of fact I shall have only to allude to certain subjects indicated in my syllabus, for it will be impossible for me to devote further attention to a systematic course of lectures. I will then mention the first preparation found in the "British Pharmacopœia," the *Acetum Cantharidis*. It will at once be observed that glacial acetic acid is included in the formula, although acetic acid containing 33 per cent. of real acetic acid is present.

The pharmacist will naturally ask the reason, and he should be prepared to give an answer. Great faith was had in this preparation as a stimulant and vesicatory, but acetic acid alone was found to be an imperfect solvent of cantharidine, and that it was far more soluble in the glacial acid. It is doubtful whether the real efficacy of the preparation was not due originally to the acid with which it was made. It would, therefore, be very properly asked, why was such a formula allowed to remain in a pharmacopœia? The answer was that a preparation under this name was constantly prescribed by medical men, and dispensers would naturally turn to some recognised authority for its exact composition. Still there are other vesicants much superior, and chiefly the *Liquor Epispasticus*, made from powdered cantharides and acetic ether, which may be said to have superseded the rest.

The *Acetum Scillæ* is another acetic compound. This is made simply by the action of diluted acetic acid on bruised squill, this strength being considered sufficient to dissolve the scillitin. In itself it is rarely used, but appears to be efficacious when combined with clarified honey under the name of "oxymel scillæ."

Another preparation belonging to the same class is *Tinum Ipecacuanhæ*, in which the ipecacuanha, coarsely powdered, is macerated in acetic acid for twenty-four hours. You are aware that considerable discussion has arisen with reference to this subject; time will not allow me to enter on any recapitulation; there is also the acetic extract of colchicum, which must be included in the series.

Distillation.

Another mode of exhausting the active constituents of drugs is by a process termed distillation. Considerable changes have been effected, at all events as regards the mechanical method of conducting the process.

There was the old alembic: and the still head fastened on a capacious boiler; the steam generated being passed through a huge coil or worm immersed in water. The whole apparatus was cumbersome and demanded more space than modern requirements would tolerate. In using water so as to effect condensation it is desirable to know the right quantity needful to apply, else a wasteful process may be adopted. The question depends upon the theory of latent heat, or that heat which is absorbed into a substance without visible increase of temperature; a definite quantity of heat is thus rendered latent when bodies pass from the solid into the liquid, or from the liquid into the gaseous state. Roughly speaking the latent heat of water is 1,000°. The available absorbing power of water is the difference between the temperature at which it runs in and that at which it afterwards runs out. Say it is supplied at 60° and escapes at 160°, its absorbing power would then be 100°. Consequently it would be necessary to supply ten gallons of cold water for the condensation of one gallon of aqueous distillate.

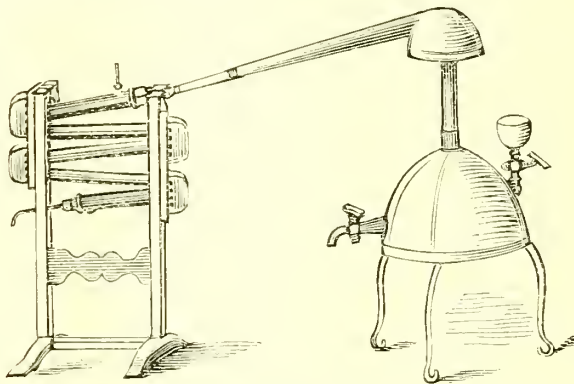
It would at first sight be supposed that alcohol and ether, and particularly the latter, being more volatile than water, much more cold water would be necessary for their condensation; but directly the contrary is the case, their latent heat being far less and their boiling-point being considerably lower.

The old still and worm tub have almost entirely disappeared,

and we have now in some form or other, but mainly on the same principle, an apparatus known as

Liebig's Condenser.

This consists essentially of two tubes fitted one within the other, water passing through the intermediate space, the vapour to be condensed being passed down the inner tube, while a continuous stream of cold water flows up the space between the two. This is an excellent arrangement for economising space, as shown in the illustration.

*Distilled Waters.*

The process, I need hardly state, is greatly used in *Aqua Destillata*, the so-called *Aqua Camphoræ* and *Aqua Chloroformi* being mixtures and not distillates. Water is officially defined as natural water, the purest that can be obtained. Absolutely pure water I believe to be unobtainable—at least by any methods with which I am acquainted.

In dispensing, the use of *Aqua Destillata* is alone sanctioned. It will be noticed that the flowers, fruit, leaf, bark, &c., are the parts ordered to be distilled in the majority of cases, the admixture of essential oil by agitation or otherwise being discountenanced. I believe that the point has been satisfactorily determined that this is the best method of proceeding. There was a difficulty in obtaining the oils themselves in a perfectly unchanged condition, and the products were subject to deterioration. *Aqua Cinnamomi*, for instance, made from bruised bark, is a totally different preparation from that made from the oil. Moreover, spirit as a means of preservation has been rejected. Spirit was proved to exert a directly contrary influence; in the case just mentioned, cinnamic acid was produced. Cinnamon-bark water will keep unimpaired for a considerable length of time. *Aqua Mentha Piperitæ* and *Aqua Mentha Viridis* are made from their respective oils, a method dictated by experience.

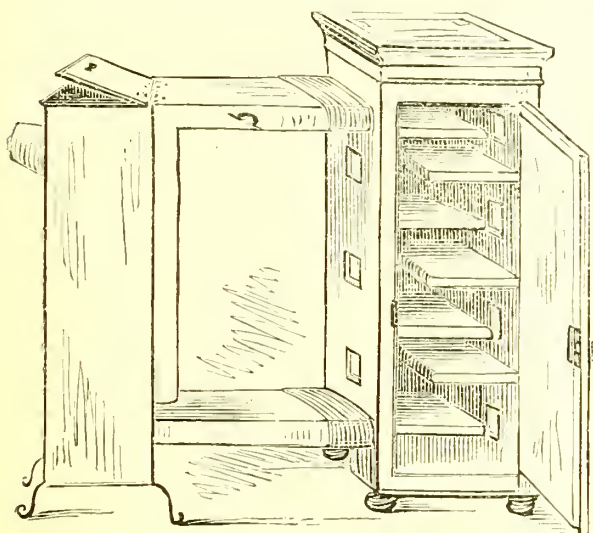
Evaporation.

The vaporisation of liquids is not limited to distillation; it is also effected by evaporation, a process applied to the preparation of extracts. It is highly necessary to adopt the best means for conducting this part of the operation. There is a difficulty in effecting requisite concentration without causing some alteration of the proximate principles of the vegetable matter in which the medicinal virtues consist, and of preserving them unimpaired. We have at command the water-bath and the application of steam.

Some years ago Mr. Barry, of the firm of Allen & Hanburys, of Plough Court, introduced his process—inspiration *in vacuo*. The liquid was distilled out of the vessel containing the extract into a large globular receiver, which had been previously exhausted of atmospheric air by filling it with steam, the steam being subsequently condensed by the application of cold water to the outer surface of the receiver. Ebullition was induced at a very low temperature in consequence of the removal of the pressure of atmospheric air from the surface of the liquid. The theory was good, but the process could never have been practically carried out, especially on a large scale. In the first place condensation in the receiver was so very slow; and, secondly, the vessels soon became filled with steam, the elasticity of which, acting on the surface of the liquid, produced much the same effect as atmospheric air itself. I have for many years past advocated

the preparation of extracts *in vacuo*, but exhaustion of atmospheric air is effected by the air-pump, which, as far as I know is the only efficient means; steam, moreover, is drawn off as it rises. I have been able to evaporate more expeditiously at a temperature from 120° to 150° than by boiling under ordinary circumstances over an open fire. I have here a small apparatus (a larger one has been already figured, vol. 28, p. 559), so constructed that by the insertion of a thermometer in the vessel the temperature can be accurately determined, while the gauge attached to the air-pump shows the pressure, or rather the diminution of pressure, to which the apparatus is subjected. Two circular glass eye-holes are inserted in the upper disc of the receptacle, so that by reflected light the operator may ascertain precisely what is taking place within. To make the apparatus perfect, a stirrer should be inserted, so as still further to promote evaporation.

You will have observed that with regard to the extracts of alocs we are directed to evaporate the mixed liquids to dryness by a current of warm air. The difficulty is, and remains, what would be a suitable vessel for attaining this end? Pardon me for too frequently alluding to my own inventions. I devised some years ago a mode of applying dry heat, the principle of which I am satisfied is correct, but I would by no means recommend you to have a similar one constructed to that now exhibited, as it would never answer except on a large manufacturing scale.



The apparatus consists of an air-tight cupboard furnished with shelves, fixed so as to be air-tight at each alternate end, while at the opposite end of each shelf an open space is left through which a current of dry air passes.

A flue at the left side is heated by a fire, the grating of which is placed about three parts down to the bottom, and the essential principle of the apparatus consists in the current of dry air being compelled to enter at the top and find its way down and over the shelves on which the substance thus submitted to spontaneous evaporation is placed. Were the current introduced at and from the bottom it would soon be charged with aqueous vapour, and in proportion as condensation might take place, or its specific gravity be increased, its action would be impeded.

Concluding Remarks.

At this point the Professor found that he had reached the allotted hour, and he therefore begged permission to allude briefly and in very general terms to some of the specimens placed upon the table. Glycerine was thus alluded to:—It was agreed, said the lecturer, not to adopt some terms which had been previously introduced. Glycerose had been suggested, but it has been thought advisable to employ simply the term Glycerine. There is the glycerine of starch, for which originally we are indebted to a well-known pharmacist. The formula has been improved by the addition of a certain quantity of distilled water, which promotes the disintegration of the starch globules. Constant stirring is required, espe-

cially towards the end of the process, to avoid charring and to produce a translucent jelly.

There is the glycerine of alum, and the familiar glycerine of tragacanth, the chief pharmaceutical use of which is to give consistency to a pill-mass. Attention was also directed to the ointments, many of which were exhibited. "They were made for me," said the Professor, "as well as many other preparations, by one of our examiners, Mr. Gale, of Oxford Street, who can vouch that they were strictly prepared in accordance with the instructions of the British Pharmacopoeia. Some ointments contain as a basis soft and hard paraffin. The compilers did not wish to tie themselves down to any particular manufacture, but paraffin itself was most advantageous from its not being subject to chemical alteration. In some ointments benzoated lard has been advisedly introduced, always as a local application; and in *Unguentum Cetacei*, benzoïn in coarse powder has been added. Great disappointment has been experienced in the non-keeping properties of spermaceti ointment. The addition of benzoïn is an effectual remedy. The emplastra can only be briefly mentioned. Considerable discussion has taken place respecting one called *Emplastrum Belladonnae*. This is now made from the alcoholic extract of the root, the objection raised being that it is no longer a green plaster made from the green extract of the leaf. I do not know what this green extract is. The one on the table, faithfully prepared by the old process, cannot be called green, the colour not being stable on the application of continuous heat. An objection was made to the former, emplastrum belladonnae, that it was liable to ooze and stain the linen, which it is the object of the soap plaster to prevent.

"I have to thank you," said the Professor in a concluding sentence, "for the attention you have paid to the remarks I have endeavoured to bring forward, and I hope that some things that have been said have been of interest and may prove of service."

Dental Notes.

ALUMINIUM BRONZE IN MEDICINE AND DENTISTRY.

PROFESSOR C. SAUER (Berlin) strongly recommends this bronze for the under layer of teeth-plates and other purposes. It is an alloy of nine parts of copper and one part of aluminium. It admits of almost as ready stamping and pressing as pure silver (which, next to pure gold, is the softest metal), and it has besides the elasticity of steel. In form of wire, aluminium bronze possesses a power of resisting tension approaching that of steel wire. These characteristics render it capable of substitution in many cases for silver, and for silver and gold alloys. The melting-point of the bronze is higher than that of pure gold— $1,000^{\circ}$ C. It may, accordingly, be made red-hot without danger of melting, and manipulated with hard solder. It is soldered with fourteen or sixteen carat red gold, which is more capable of resisting chemical influences than silver solder.

Prof. Sauer has made various experiments with aluminium alloys; the zinc alloy was unstable, the zinc oxidising in the mouth, and gold and platinum alloys (with aluminium) also decomposed. Whereas in two cases aluminium bronze placed in the mouth under the influence of a galvanic current did not, after the lapse of four weeks, suffer loss of weight. The bronze oxidises only superficially in the mouth. There forms upon it a kind of patina, such as is formed in the wearing of plates of fourteen, sixteen, eighteen, and even twenty carat gold. It admits of manufacture into spiral springs, plates, screws, canulas, &c., for surgical purposes. Even knives have been manufactured from it. A solution of corrosive sublimate of one to one thousand affects it superficially. For its disinfection carbolic acid is to be preferred, as it does not attack the bronze. Gold aluminium bronze acts similarly, but oxidises to a greater extent, is softer, and not so elastic, and therefore is to be used as green gold or twenty-carat gold is used.—From *The Therapeutic Gazette*.

TOOTHACHE, when caused by acidity of the saliva acting on the exposed nerves, is promptly relieved by a strong solution of bicarbonate of soda used as a mouth wash and dentifrice.

Practical Notes and Formulae.

ANALYSES OF FACE POWDERS OF THE MARKET.

By W. H. SNOW in *A New Idea*.

Sean Down.—Manufactured by Henry Tetlow:—

Zinc oxide	..	..	..	38.9	per cent.
Orris root	..	..	..	18.35	"
French chalk	..	..	..	42.75	"

Wright's.—A harmless face powder manufactured by Alfred Wright of Rochester, N. Y.; claimed by its manufacturer to be "entirely free from lead or other poisonous minerals, and no more hurtful in use than common starch." Upon examination it proved to be:

French chalk	..	..	..	25.48	per cent.
Corn starch	..	..	..	33.73	"
Bismuth oxide	..	..	..	0.8	"
Ca'cium sulphate	..	..	..	40.19	"

Saunders' Bloom of Ninon.—Saunders' pure white face powder, or Bloom of Ninon, manufactured by J. T. Saunders, Oxford Street, London; claimed by its manufacturer to be a "delicate preparation for beautifying the complexion, free from anything which can possibly injure the skin." Each box holds 1 oz. 25 grains. We offer the following formula:—

Precipitated chalk	..	..	..	23.00	parts
French chalk	..	..	..	23.76	"
Bismuth subcarbonate	..	..	..	6.64	"
Zinc oxide	..	..	..	16.60	"
Corn starch	..	..	..	30.00	"

Pozzoni's (White).—J. A. Pozzoni's complexion powder manufactured in St. Louis, Mo., states on the label that it, "imparts a brilliant transparency to the skin, removes all pimples, freckles, and discolorations, makes the skin delicately soft, perfectly harmless, containing no arsenic or other deadly material." Found upon examination to be:

French chalk	..	..	..	55.95	per cent.
Calcium carbonate	..	..	..	31.25	"
Bismuth oxy-chloride	..	..	..	12.8	"

Palmer's Lily White Tablet for the complexion, prepared only by Solon Palmer, New York. Examination proved it to be:

Precipitated chalk	..	..	..	42.5	per cent.
French chalk	..	..	..	57.5	"

Palmer's Invisible was found upon examination to be a silicate of alumina, magnesia, potash, and soda, coloured with carmine. The natural silicate is probably French chalk.

[The foregoing are analyses merely, and are not to be taken as formulæ from which the various preparations may be compounded. Perfumes have to be added, and it is not necessary to adhere rigidly to the quantities given.]

EAU DE QUININE.

	Parts
Ol. ricini	.. .. 10
Bals. Peruvian.	.. .. 3
Spir. sacchari (rum)	.. .. 100
Aq. destillatæ	.. .. 50
Tr. cinchonæ succubæ.	.. .. 10
Spir. colonicus.	.. .. 10

Mix.

DUTCH DROPS.

A CORRESPONDENT of the *Druggists' Circular* gives the following formulæ:—Genuine Dutch drops are the residuum of the rectification of oil of turpentine. Imitations:—

(1) Bals. turpentine	..	..	..	2	oz.
Oil turpentine	..	..	..	10	"

Mix.

(2) Linseed oil	..	..	..	1	quart
Resin	..	..	..	2	lbs.
Sulphur	..	..	..	1	"

Boil together over a slow fire; when combined, remove from the fire and add 1 pint oil turpentine and 50 drops liq. ammonia; stir and bottle.

ANTI-NEURALGIC OINTMENT.

	Oz.
Chloral	.. .. 1
Menthol	.. .. 1
Cocoa butter	.. .. 4
Spermaceti	.. .. 2

M. S. A.

To be applied to the skin when the pain of the nerve is felt, or to the forehead in sick-headache.

LIQUID POLISH FOR SHOES.

Lampblack	..	..	..	1	drm.
Oil turpentine	..	..	..	4	drms.
Alcohol (methylated spirit)	..	..	..	12	oz.
Shellac	..	..	..	1½	"
White turpentine	..	..	..	5	drms.
Sandarac	..	..	..	2	"

Make a solution by digesting the mixture in a close vessel at a gentle heat and strain.—*Western Druggist*.

FILTERING SHELLAC VARNISH.

Shellac varnish made with alcohol may be filtered without difficulty if it be previously well shaken up with a small quantity of some inert powder, such as plaster of Paris, chalk, phosphate of calcium. About 2 ounces per pint is sufficient. The varnish may also be rendered clear by mixing it with one-fourth its volume of benzine or petroleum ether, shaking it frequently during one or two hours, and then setting it aside, when the clear alcoholic solution will collect at the bottom, and the benzine, containing some fatty or waxy substances in solution, will float on top. After removing this layer, the alcohol solution may, if necessary, be freed from nearly all benzine odour by gently warming. If the shellac be first extracted in coarse powder, by warm benzine, it will afterwards furnish a clear solution in alcohol.

COLOURLESS VARNISH FOR PRINTS, ETC.

THE *Art Amateur* gives the following directions for making a colourless varnish suitable for prints, oil-paintings, and hard white wood:—Dissolve 2½ oz. shellac in a pint of rectified spirits of wine. To this about 5 oz. of well-burnt animal charcoal that has been recently heated must be added, and the whole boiled for a few minutes. If, on filtering a small portion of the mixture through blotting-paper, it is not found to be perfectly colourless, more charcoal must be added, until the desired result is obtained. When this has been achieved, the mixture must be strained through a piece of silk and filtered through blotting-paper.

TO RENDER WOOD INCOMBUSTIBLE.

"INVENTION" describes a new patent for rendering wood incombustible, in which the wood is first well dried and afterwards impregnated with a solution of about 4 parts by weight of borax and about 3 parts by weight of Epsom salt in about 20 parts by weight of hot water. The impregnated wood is coated with a mixture of washed clay and a sufficient quantity of liquid water-glass to enable the mass to be applied by means of a paint-brush. The wood, having again become dry, is covered with paper or with woven fabric, the latter having likewise been impregnated with the solution. Lastly, the whole is painted over with a mixture of from 30 to 40 parts by weight of sulphate of ammonia, and from 35 to 45 parts by weight of gypsum diluted with a sufficient quantity of water.

AYER'S SARSAPARILLA.

MESSRS. J. C. AYER & Co. have published the formula of their sarsaparilla which is as follows:—

Spirit. vini recti.	..	..	..	3iij.
Ext. rad. sarzæ	..	..	..	3iij.
" rume crispi	..	..	..	3iij.
" stillingie	..	..	..	5ij.
" podolph. pelt.	..	..	..	5ij.
Sacchar.	..	..	..	3j.
Potass. iodid.	..	..	..	5ss.
Ferri iodid.	..	..	..	9ss.

They claim to use only Honduras sarsaparilla and the best quality of all other ingredients, and that the preparation is made with the greatest care, on scientific principles.

NOTES ON MAIZE OIL.

By E. B. SHUTTLEWORTH.

A NEW process for the removal of the integument and embryo of Indian corn has recently been made the subject of a patent in the United States. It has already been successfully applied to the preparation of grain for conversion into glucose, and is now being turned to good account in the manufacture of starch. It also seems likely that the process may be used to advantage by the distiller, as it is probable that some of the leading impurities in corn spirit originate in those parts of the grain which the process is designed to remove.

The Toronto Syrup Company have acquired the right to use this patent in Canada, and have now just completed the erection of the machinery and plant necessary to operate on 700 bushels of corn per day. Having been engaged in an examination of the rejected portion of the grain, more especially the germ, I have taken the liberty of presenting a few facts which will probably be new to most persons.

By the process of grinding, which constitutes the peculiarity of the patent, the albumen or starchy portion of the grain is thoroughly disintegrated, while the pericarp or hull, with the embryo, is completely separated. The weight of the two latter, obtained from a bushel of corn of 56 lbs., is 16 lbs., from which from 8 or 9 lbs. of germ may be obtained by sifting. These portions are, at present, sold for cattle food, and can be readily disposed of at 1 cent per lb., but it is more than likely that under proper manipulations they can be made to furnish products of considerable economic value.

The germ is obtained in the form of a flattened, white, horn-like substance, and is with difficulty pulverisable. On being subjected to pressure it yields a quantity of fixed oil, and a similar product can be obtained by the use of appropriate solvents.

The oil has for some time been known to chemists, but, as far as I have been able to ascertain, has not been made the subject of investigation. It is of a pale yellow colour, which quickly becomes greenish by contact with copper. Its consistency or viscosity is greater than that of olive oil, and is similar to that of almond oil. The taste is at first bland, but is followed by some acidity, and the odour is sourish, recalling the smell of a baker's workshop or distillery. The specific gravity of the oil obtained by pressure is .92.

It is readily soluble in ether, chloroform, carbon disulphide, and oil of turpentine; mixes less readily with petroleum, ether, and fusel oil, and is sparingly dissolved by cold alcohol, but more soluble in boiling alcohol, from which it is separated on cooling.

The elaidin test, with mercury and nitric acid, produces in 30 minutes a yellowish-orange colour, followed by partial solidification, showing the oil to be of the non-drying class.

The amount of oil contained in the germ, as estimated by ether, by cold prolonged extraction, is 11.75 per cent. I have not yet had time to arrange for a more thorough trial with boiling ether, but do not think this quantity will show much increase by this method, as the powder used was fine and the percolation thorough. The statement now going the rounds of the papers, that a company in St. Louis obtains from a bushel of corn one gallon of oil, worth 75 cents, is, of course, utter nonsense, as the entire weight of the germ from that quantity would only be slightly over the weight of a wine gallon of oil (7.66 lbs.).

As to the commercial value of the oil, it is at present difficult to say. In its crude state it would not command a high price, on account of the objectionable odour; but this might, doubtless, be removed by proper treatment, so as to bring the product up to the grade of refined cotton-seed oil.

The germ yields to cold alcohol a small quantity of oily matter containing a volatile odorous principle, of a very decided and penetrating grain-like smell, strongly resembling that of crude spirit. The separation of the germ from the corn, prior to the mashing process, would probably enable the distiller to secure a purer ethylic alcohol than at present possible, and I believe the experiment to be one well worth making. The corn does not contain any alkaloidal body which responds to the ordinary reagents.—*Canadian Pharmaceutical Journal*.

PHARMACY IN CUBA.

A CORRESPONDENT of the *American Druggists' Circular*, writing from Havana on May 2, 1886, gives a sketch of the condition of pharmacy in Cuba. Havana, he says, is a queer old city with its narrow streets and still narrower sidewalks, the latter being about 18 inches in width. It is a place of 250,000 inhabitants, and contains ninety-four registered retail drug stores and two first-class wholesale druggists. Of course the Spanish Pharmacopœia is used, and only drugs and medicines are sold by the druggist.

I visited the majority of the retail stores, and in only two saw even a show-case on the counter; the stores are generally small, but very neat and clean. Out of the fifty I was in, forty-one had marble floors. The general arrangement is similar to ours, except in the absence of show-cases and soda-fountains. Not even combs, brushes, or soap are allowed to be sold, and only three of the whole sell perfumery, and this is by a special license.

A government inspector visits each druggist four times a year, examines from three to five articles to see that the pharmacist sells pure drugs, signs his certificate, and receives a fee of \$15.00 gold for each visit.

Nearly all of the shops have names, such as "The St. Domingo Farmacia," "The Lion," "The Eagle," "The Elephant," "The Monkey," and one enterprising Spaniard called his the pharmacy of the "Devil." No matter how often the proprietor changes the name remains the same.

I noticed a number of American patent medicines on the shelves in nearly all of the stores. Most of these have entire Spanish wrappers and are put up for this trade.

I had the pleasure of being shown through the wholesale stores of José Sarra and Lobé & Co., and outside of one or two establishments in the States I never saw cleaner, nicer stores. Everything in drugs, chemicals, patent medicines, roots, and herbs is kept in drawers and cases. They carry no stock of sundries except syringes, nipple shields, and ice bags—not even sponges—and such a thing as having a call for paint is unheard of. The whole of their buildings are drawers, from the floor to the ceiling, tin-lined, numbered and labelled on the outside. They buy mostly in New York, London, and Madrid.

The retail druggist puts up his prescription in the very neatest possible manner, using the very best German gold edge box for pills and powders, and carefully capping the corks. The bottles used are of the best American lettered glassware. I noticed that for such standard articles as glycerine, paregoric, tincture of iron, tincture of arnica, laudanum, and castor oil, the names of the articles are blown on the bottle, besides having it labelled and nicely capped, and then wrapped and labelled again on the wrapper.

American goods would be more universally used if it were not for such a discriminating duty as is now put on them. On patent medicines the duty is by weight.

Druggists are not allowed to prescribe for anyone. I witnessed an amusing incident on St. Raphael Street. A Cuban came into a pharmacy and asked for something to cure a pain in his back. The clerk told him he must go to a physician. The poor fellow begged him to give him something, but this the clerk refused to do. I asked him why he did not sell the fellow a Benson's plaster, but all the answer I got was a shrug of the shoulder.

The absence of signs on the inside is also noticeable, but as the Cuban sells only drugs and medicines, he is protected to the extent that only druggists can sell such; and they manage to get good living prices, and cutting is unknown.

BAY RUM IN THE WEST INDIES.—Mr. R. Bergter writes from Curaçao to a German pharmaceutical journal that bay-rum is very largely used there to add to water for washing purposes. The foreign steamers calling at the islands are in the habit of regularly taking a case of bay-rum for use on board. But for this purpose the bay-rum must be of the best quality, distilled from the leaf. San Thomas produces the best bay-rum, and also essence, which, however, is much less efficacious. It should be noted that in the West Indies all sugar spirit of a certain strength, generally 21° Cartier, is called "rum." Venezuela has latterly commenced to produce bay-rum of very fair quality, but the production there is handicapped by almost prohibitive duties.

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GOLD MEDALS, Calcutta, 1884, and Paris, 1885.

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SEE ADVERTISEMENT, PAGE 20.

Friedrichshall.

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"I know nothing at all equal to Friedrichshall. The LONGER it is taken the SMALLER is the quantity necessary to effect the purpose."

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Of all Chemists and Mineral Water Dealers. [2]

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MEDICATED BISCUITS—"HERON," Nos. 1, 2, & 3.

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PURE STARCH POWDER

In 7-lb., 14-lb., 28-lb., 56-lb., and 1-cwt. bags, 28s. per cwt. net, bag included, delivered free in London. [1]

EDITORIAL NOTES.

PROFESSOR REDWOOD'S LECTURES ON GALENIC PHARMACY.

WE publish this week the final lecture of the course of practical demonstrations of galenic pharmacy, instituted by the Pharmaceutical Society, and prepared and delivered by their eminent Emeritus Professor, Dr. Redwood. When that course was commenced we had hoped and expected to have the opportunity of congratulating the Society and British pharmacists generally on the realisation of a happy idea. The ample resources of the Pharmaceutical Society, and Dr. Redwood's immense technical knowledge and peculiar experience seemed a combination which must ensure success. We cannot say that the success which was quite reasonably anticipated has been in all respects achieved. We believe it was intended to admit freely to the lectures anyone who might take sufficient interest in them to attend; and as a matter of fact students from other schools and persons quite unconnected with the Society were admitted. Surely it would have been sensible to make that liberal intention, if it existed, quite clear to all persons concerned. One would have expected that if the Society sought to enhance their reputation, or to benefit pharmacy by these lectures, announcements of them would have been circulated through the usual channels. Nothing of the kind was done. The Society's Journal published the Professor's notes, while we, uninvited and unofficially, prepared reports of his actual lectures, slightly condensed, and with some slight illustrations added, in order to provide readers with some of the advantages which otherwise would have been confined to hearers only. It would almost appear that those illustrated reports perfectly answered the purpose intended, for after the first lecture the audiences dwindled in almost geometric progression.

Professor Redwood's reputation as a pharmacologist is fully established, and has been continually recognised in these pages. In intimate acquaintance with the multitudinous processes of pharmacy, and in the common-sense application of those processes, he is unrivalled. It is only just to him to say that in the course of lectures he has just delivered, he has not been fair to himself. The opening lecture was admirable, and promised an interesting series, and there were of course many good things in the subsequent instalments of the course. But two lectures devoted to general commentaries on the simple processes of infusion, decoction, maceration, and percolation, processes which the housewife who follows them never dreams are scientific, and which are only redeemed from being absolutely commonplace in pharmacy by their high-sounding titles, was far too great an infringement on the very limited time allotted to the whole course. In a thousand-page treatise on pharmacy it would be necessary, no doubt, to describe these processes at some length, but to make out of them a whole third of a complete course on galenic pharmacy brings the description dangerously near to padding.

The phrase "galenic pharmacy" is a peculiarly lucky one. It is capable of such limitations that it anticipates almost all criticism. Dr. Redwood expressly stipulated that it should exclude all kinds of chemical pharmacy, and probably this is etymologically correct; consequently the most difficult and the most interesting operations of pharmacy are cleared away at one sweep. Then anything that remotely approached dispensing, such as the compounding of ointments, the spreading of plasters, and the formation of pill masses, not

to speak of pill-coating; anything modern, as for example the manufacture of scale or peculiar preparations, compressed powders, capsules, &c.; anything associated with another business, such as lozenges; and with trifling exceptions any process yielding any sort of solid substance—all these seem to have been regarded as foreign to galenic pharmacy. We should not have expected the Emeritus Professor of Pharmacy to expound the mysteries of Hop Bitters or Mother Siegel's Syrup, though the editor of a pharmacopœia which guesses at the composition of chlorodyne and other nostrums might without much straining have swallowed those little camels; but we surely had a right to look for something rather more modern than the discussions about percolation of forty years ago, which is a period not far enough back to be truly galenic, and yet too far distant to retain its full interest for the present generation.

If only the Pharmaceutical Society had had the foresight to engage Mr. Umney or some other champion of anti-Redwoodian ideas to interject a criticism here and there, we should have had a course of lectures lightened by the flashes of spirited exposition and defence which have given such charm and effectiveness to many of the Professor's recent speeches, and we should have had a much more generous flow of his rich stores of pharmaceutical knowledge.

Some of the statements in Professor Redwood's lectures are, to say the least, debateable, but we cannot now touch on many of the points raised. On the subject of the comminution of drugs it is undeniable that there are some strong critics who maintain that the Pharmacopœia directs powders much too fine. The lecturer replied to such comments by boldly selecting perhaps the worst example for his own case which the Pharmacopœia presents. It is extremely likely that the exclamation, "Here is a nice mess of a decoction!" which he heard in imagination would be sometimes uttered when Decoctum Pareire is prepared. The Professor's definition of a No. 20, 40, or 60 powder is that the powder should contain only a small proportion of particles of less size than that indicated by the figure quoted. Sir Isaac Newton discovered that the kitten could get through the hole made for the cat, and pharmacists have found that the meshes of a sieve suited for a 20 powder will pass powders of 40 or 60 dimensions. Dr. Redwood showed that this difficulty is not insurmountable, and that powders fairly uniform are obtainable by using an American "Enterprise" mill. That no doubt is the case; but how many pharmacists possess anything beyond a good metallic mortar and pestle? With this it is impossible to avoid forming a fair proportion of impalpable powder, the separation of which involves both waste of material, double sifting, and other inconveniences, which tend to induce the pharmacist to stock ready-made preparations. The question is whether the end aimed at justifies the elaborate means recommended.

The necessity for minute and uniform division of drugs was inculcated as essential to success in preparing tinctures by percolation. In practice, especially on a large scale, heavy loss is entailed by following this principle strictly, and we could not have thought that a modern lecture on this subject would have been put before a pharmaceutical audience without some account of the method of repercolation introduced and carried out successfully by American pharmacists.

In the last lecture Professor Redwood stated that belladonna plaster as formerly made from the leaf extract was not green but black. This assertion could easily be tested by the production of an old worn-out belladonna plaster, or an under garment which has been in proximity with one.

It was stated in the third lecture that concentrated infusions have ceased to be a necessity, since the Pharmacopœia has doubled the quantities of the ingredients and reduced the

time of maceration. But therapeutics advance more rapidly than pharmacy. Once upon a time infusions were prescribed for their own sake as active medicinal agents. Now physicians prescribe more definite and more active substances—alkaloids, liquid extracts, and the like, and only one or two infusions remain as actual remedies; the rest are placebos. Fresh infusions are still made, but they are unknown to the majority of physicians and pharmacists. Should not the Pharmacopœia conform to the customs of the day? Concentrated infusions are not necessarily evaporated down to a concentrated form, as some erroneously suppose.

THE PHARMACEUTICAL CONFERENCE.

WE notice with pleasure that the executive committee of the British Pharmaceutical Conference have resolved to carry out at the Birmingham meeting in a more complete fashion than heretofore the policy of charging to each visitor the cost, or at least some proportion of it, of his entertainment. It is intended, we are told, to issue two classes of tickets, one of which will be supplied for 5s., and this will entitle the holder to the President's reception and conversazione, to the daily luncheons, to the use of conveyances to the various works to be visited, and to a concert on one of the evenings at the Grand Hotel. The other ticket, which will cost 10s., will cover besides the excursion on the Thursday, including first-class railway fare, carriage drive, and free admittance to the various places of interest in Stratford, Leamington, and Kenilworth. Applications for one or the other of the tickets must be made to Mr. Charles Thompson, Sparkbrook, Birmingham, the hon. local secretary, before August 23. Mr. Thompson also offers his assistance in the engagement of rooms during the meeting. We gather that the graceful offer of the Leamington chemists to nourish their pilgrim brethren on the occasion of the excursion will be accepted. We learn that a fair number of papers is already promised, and there seems no doubt that the forthcoming meeting will rival any of its predecessors in respect of interest, and will probably surpass most of them in point of attendance.

MEDICAL STUDENTS.

FROM the summary of statistics regarding medical students as presented in the second report of the Statistical Committee of the General Medical Council we draw some interesting particulars regarding the students, their schools, and their curricula. The report relates to the students who have been registered during the quinquennium 1871-75. The registration of medical students appears to be a somewhat uncertain matter; all who proceed to qualification through the medium of a licensing body must first pass a preliminary examination, and this matriculation might reasonably carry with it registration as a medical student. But that this is not the case is apparent from the fact that, of the 1,377 names of newly-registered practitioners added to the Medical Register during 1885, 100 had not previously been placed on the students' register, which is kept by the Registrar of the General Medical Council. This is regarded as an informality, and with other irregularities—as, for example, double registration and antedating—is considered pardonable in a system which is comparatively new—it was originated in 1865; and it is hoped that all will disappear as the deans of schools realise that registration by the Medical Council relieves them of much troublesome detail. During the quinquennium referred to, 6,449 medical students were registered, viz., 1,254 in 1871, 1,313 in 1872, 1,211 in 1873, 1,367 in 1874,

and 1,304 in 1875. Since that year there has been a remarkable influx into the medical profession, and in 1880 over 2,100 names were placed on the student's register. Omitting the foreign and colonial registrations, we find the medical students of 1871-5 thus distributed:—

—	1871	1872	1873	1874	1875
London . . .	377	423	400	398	414
Provinces . . .	182	222	283	214	210
Scotland . . .	332	316	335	332	401
Ireland . . .	342	349	198	379	284

Edinburgh University appears to be the only institution which maintained an unwavering superiority as to numbers during the quinquennium; and of provincial schools, Manchester—except in 1873, when there was a large influx to Cambridge—has always had more students than any other. In London, Gay's and St. Bartholomew's appear to be the favourites. In Ireland, Ledwich Medical School, Dublin, Queen's College, Belfast, and the School of Physic divided the honours amongst them. As regards the students more particularly, the year 1871 affords us a good indication of the other years in the period. Of the whole 1,236 who began study in that year, 373 have not yet qualified—that is, fully 30 per cent. Many of those have become "chronics," no doubt, but a large number must have given up the idea of becoming qualified, and some have chosen to live on as unqualified assistants. The ideal or minimum period of study is three years and nine months, but the actual average for registration is 5.444 years. Strange to say, the singly qualified men take 5.857 years for their diploma, while the doubly qualified take only 4.81 years. It might be hastily inferred from this that singly qualified men are much inferior to the others; but as a large proportion of the latter take their qualifications from a university, and most of these grant the double qualification with not much more trouble than is required for a single, it follows that their students get on the Medical Register comparatively early. But single qualification was the exception, and has become extinct with the passing of the new Medical Act. In connection with the duration of study, it may be stated that the opinion is pretty general that the minimum period, three years and nine months, is too short, and recently there has been a movement to get two sessions added to it; but, this failing, an endeavour is now being made in some universities to establish post qualification classes, the idea being that, though a student may have done enough to entitle him to a degree, he has not got wisdom enough to entitle him to practise.

CULTIVATION OF MEDICINAL HERBS IN AUSTRALIA.

MR. D. McALPINE, the lecturer on botany at the Melbourne College of Pharmacy, has written in the *Australasian Journal of Pharmacy* an account of a visit he has paid to some medicinal-herb grounds in the vicinity of Melbourne, at a place called Box Hill, Mitcham Grove. These grounds are owned by Messrs. W. H. Slater & Sons, and the senior partner, it appears, has had sixteen years' experience at the English Mitcham. The cultivation is at present on a comparatively small scale, only about fifteen or sixteen acres out of a fifty-two-acre paddock being as yet worked. Messrs. Slater have a permanent staff of five men, of whom three have been brought from Surrey, where they had similar experience. At present all the herbs that can be raised are readily bought in Melbourne, and there is no early prospect of Victoria competing in the larger drug markets; but, according to the report, experimental success has been achieved with the poppy, henbane, stramonium, rue, tansy, mullein, squiring

cucumber, Indian hemp, pennyroyal, peppermint, spearmint, and licorice-root. "Lavender does not grow quite so well as at Mitcham, Surrey, whence the stocks have been obtained, but it is believed that, if the same labour and manure were expended upon it here, crops at least equal in quantity could be raised." The writer adds, with a quiet assurance, that "the oil is equal in quality to the home article." Mr. McAlpine gives but few details as to Messrs. Slater's results, but only records them generally as satisfactory.

DISTILLATION IN TASMANIA.

A REGISTERED chemist, named R. C. Rawson, was fined 100*l.* at the police-court, Hobart, on April 17, for having an unregistered, and therefore illicit, still on the premises of R. Rawson, senr., an unregistered chemist. The senior gentleman was fined 100*l.* also. The case is of interest, because it reveals the singular fact that in Tasmania registered chemists are allowed to distil spirit for making tinctures. Such stills are not to contain more than five gallons, and chemists are not allowed to retail pure spirit under any circumstances.

THE NEW PARLIAMENT.

TRADE and the trading classes generally are coming very prominently to the front in Parliamentary contests and in Parliament itself. Until recently lawyers, soldiers, brewers, and landlords had it all their own way, and one or two representatives of the working classes were politely received. At the elections last November a quite unprecedented proportion of representatives of the middle classes came forward, and a large number of these were returned. The commercial classes had evidently resolved to have a little more to do with the ninety millions spent annually by the Government than simply contributing a large share of that sum; and it may be assumed that henceforth no measures will be adopted by the British Parliament without British traders having a fair voice in deciding upon them.

Some pharmacists are very indignant that one or two members of Parliament are not set aside to represent pharmacy exclusively. That, at least, we presume is the idea working in certain minds, for there is never likely to be a constituency under our present system of representation containing chemists and druggists exclusively. But we have been looking through the list of candidates for the names of those who may be expected to understand more or less of one or another section of the chemist and druggist's business in the event of any question affecting that trade coming forward, and subjoin a few particulars.

Among the candidates we found only one representative of the wholesale drug trade. This was Mr. James Horner Haslett, the Conservative candidate for West Belfast, who was elected last November by a very small majority over his Nationalist opponent, Mr. Sexton, and has on this occasion been defeated by the same opponent, this result being one of the most notable incidents of the election.

A second representative of the wholesale drug trade, Mr. E. N. Grimwade, of London, was invited by the Liberals to lead a forlorn hope at Croydon, but he declined that honour. On the other hand Mr. Octavius Vaughan Morgan, part proprietor of this journal, and one of the members of the firm owning the Morgan Crucible Works, has been again returned as member for Battersea, for which borough he was chosen as the first representative. Mincing Lane was not directly represented among the Parliamentary candidates. Indirectly it found a champion in Mr. Robert Parvis, a barrister and Unionist-Liberal, who was badly beaten at South Edin-

burgh, and who is a son-in-law to Mr. W. H. Peat, of the firm of Lewis & Peat, 6 Mincing Lane, E.C.

Scientific chemistry figures more prominently among candidates than does the drug trade, and has again secured an eminent exponent in Sir H. E. Roscoe, who was re-elected as a Gladstonian Liberal for South Manchester last Friday. Sir Henry Enfield Roscoe, F.R.S., LL.D., is a son of Mr. H. Roscoe, barrister, and grandson of Mr. Roscoe the historian, and was born in London in 1833. He was educated at Liverpool High School, University College, London, and Heidelberg. He was appointed in 1857 to the chair of chemistry at Owens College, Manchester, which he still holds. He took an active part in the movement for the establishment of the Victoria University, and he inaugurated the series of science lectures for the people which have been given in Manchester for twelve years. Sir Henry is joint-editor, along with Professors Huxley and Balfour Stewart, of Macmillan's "Science Primers." In 1880 he was elected president of the Chemical Society of London, and was afterwards a member of the Royal Commission on Technical Instruction.

Sir Lyon Playfair, Gladstonian member for South Leeds, is a son of Dr. George Playfair, Inspector-General of Hospitals in Bengal, and was born at Meerut, in Bengal, in 1819. He was educated at St. Andrews and at Edinburgh, and afterwards proceeded to Giessen, in Hesse-Darmstadt, where he studied under Baron Liebig. Sir L. Playfair was Professor of Chemistry at Edinburgh University from 1858 to 1869.

Mr. John Tomlinson Brunner, Gladstonian candidate for the Northwich Division of Cheshire, which he represented in the last Parliament, is a partner in the well-known firm of Brunner, Mond & Co. (Limited), the company which has made such a remarkable success by the introduction into this country of the ammonia-process for the production of alkali. Mr. Brunner is of German-Swiss extraction. His father was a citizen of Zurich, who settled in this country and established a school at Liverpool. Mr. Brunner was born in 1842, educated in his father's school, and entered mercantile life in 1857. He founded the alkali works at Northwich in 1872. In 1885 he presented to the town of Northwich a free public library at a cost of 7,000*l*. Mr. Brunner is on the Council of the Liverpool University College.

Mr. John Macdonald Cameron, of Hammersmith, Gladstonian Liberal candidate for the Wick Burghs, was born at Ballantrai, Ayrshire, in 1847. He was educated at Sharp's Institution, Perth, and in 1866 entered the Inland Revenue service. Gaining a scholarship in 1870, he was sent to study science at the Royal School of Mines, was employed in the Inland Revenue Laboratory, Somerset House, from 1871 to 1874 as assistant chemist, and from 1874 till 1879 was instructor in the Chemical Research Laboratory, Royal School of Mines. In 1879 he resigned his appointment and began business as a practical analytical chemist. Mr. Cameron has travelled extensively, and has published various papers on professional and other subjects. He represented the Wick Burghs in the late Parliament.

In the Kennington Division of Lambeth the contest has ended in the victory of the former Conservative member, Mr. Robert Gent-Davis, a manufacturing chemist, who has defeated Mr. Beaufoy, a vinegar maker of Gladstonian views. Mr. Gent-Davis is a young man of twenty-nine years. He was educated privately, and for some time was pupil to an architect; but, at the age of twenty-three, succeeded his uncle in the membership of the firm of Sparkes, White & Co., distillers and manufacturing chemists. Mr. Gent-Davis is a Governor of St. Bartholomew's Hospital. His opponent was Mr. Mark Hanbury Beaufoy, son of the late

Mr. George Beaufoy, of South Lambeth, and born in 1854. He was educated at Eton and Cambridge, and is head of the firm of Beaufoy & Co., vinegar makers, South Lambeth Road. The vinegar trade has also a relative in Mr. J. Powell Williams, the Union Liberal member for South Birmingham, who was returned unopposed. This Mr. Williams is a son of the late Mr. Joseph Williams, a member of the firm of Hill, Evans & Co., vinegar brewers, of Worcester. He was born in 1840. The same trade, however, has suffered a loss in the overthrow of Mr. James Bigwood, late Conservative member for East Finsbury, who experienced defeat at the hands of his Gladstonian rival, Mr. James Rowlands, a labour candidate, and Mr. Bradlaugh's *alter ego*. Mr. Bigwood was born in 1839, and educated at Chatham and St. John's College, Cambridge. He is a partner in the firm of Messrs. Champion & Co., mustard and vinegar manufacturers, of the City Road. In November he appealed to the electors as a Finsbury man for Finsbury men, his boast being that he had never been out of Finsbury for more than a week at a time.

North-west Ham was contested in the Gladstone Liberal interest by Mr. Edward Rider Cook, of Woodford House, Woodford, the eldest son of Mr. Edward Cook, of Hatfield Pevenil, and born in 1836. Mr. Cook was educated at the City of London School, and at University College, where he took the first silver medal in practical, theoretical, and analytical chemistry. He is senior partner in the firm of Edward Cook & Co., soap makers and chemical manure manufacturers, Bow, and is a Fellow of the Chemical Society, and treasurer of the Society of Chemical Industry. He was returned to the House of Commons for the first time at the General Election last year, but at this election Mr. Cook is left defeated.

Two Parliamentary candidates are engaged in the salt trade, viz., Mr. John Corbett (Union Liberal), who stands for the Droitwich Division of Worcestershire, and Mr. Robert Verdin, the Unionist Liberal opponent of Mr. Brunner, in Cheshire (Northwich). Mr. Corbett, is a popular local Liberal, sixty-eight years of age, proprietor of the Stoke Prior Salt Works, Worcestershire, and director of the Gloucester and Sharpness Docks, Gloucester and Berkeley Canal, &c. He represented the borough of Droitwich from 1874 till November, 1885, and since then has sat for this division. Mr. Verdin, of Northwich, is senior partner in the firm of Joseph Verdin & Sons, salt manufacturers, and chairman of the Salt Chamber of Commerce, of the Salt Association, and of the Winsford Local Board.

Of medical men, practising and non-practising, there is no lack among candidates; no less than twenty being connected with that profession. Dr. Charles Cameron, who has been returned as Gladstonian Liberal member for Glasgow (College Division), was born at Dublin in 1841. He was educated at Madras College, St. Andrews, and subsequently studied medicine at Dublin University and in French and German schools. In 1864 he became editor of the *North British Daily Mail*, and in 1873 he succeeded to the interest held in that journal by his father. Dr. Cameron's influence caused the Government to send a commissioner to Spain to investigate Dr. Ferran's experiments of inoculation in cases of cholera; he also keeps a watchful eye on smallpox statistics and kindred subjects. He has been a representative of Glasgow since 1874.

An attempt upon the Unionist-Liberal seat in North Bristol has resulted in the discomfiture of the Gladstonian candidate, Dr. Alfred Carpenter, of Croydon, a gentleman who has long been distinguished for his devotion to sanitary science in its relation to public health. Dr. Carpenter was born in 1825, and educated at the Moulton Grammar School, Lincolnshire. He is an M.D. of London, and in 1881 was a

member of the Royal Commission appointed to inquire into the condition of the London hospitals for smallpox and fever cases, and the means of preventing the spread of infection. In 1878 he was Orator of the Medical Society of London, and in 1879 President of the British Medical Association.

The late member for Caithness-shire, now again candidate for that county in the Gladstonian interest, is Dr. Gavin Brown Clark, M.D. Dr. Clark was born at Kilmarnock in 1846, studied medicine at the Universities of Glasgow and Edinburgh, and at King's College, London, received the degrees of M.D. and Fellow and Licentiate of the Royal College of Surgeons, Edinburgh. He practised for some years in London, and is now Consul-General of the South African Republic. Dr. Clark is a plausible and fluent speaker, and during his November campaign has attended, it is said, no less than 78 meetings.

Mr. Robert Bannatyne Finlay, Q.C., late member for the Inverness Burghs, is again before that constituency as a Unionist-Liberal. He is on all hands admitted to have made an excellent impression in the House of Commons as an able debater. Mr. Finlay is the son of Dr. William Finlay, of Trinity, Edinburgh. He was born in 1842, and was educated at the Edinburgh Academy and Edinburgh University, where he graduated M.D. in 1863, but subsequently abandoned medicine for the law.

The defeated Gladstonian candidate for Chester, Dr. Balthazar W. Foster, is one of the ornaments of the medical profession. He was born in 1840, was educated at Dublin, in London, and on the Continent, and is a Fellow of the Royal College of Physicians, London, a member of the King and Queen's College of Physicians, Ireland, a licentiate of the Royal College of Surgeons, Ireland, and a member of numerous learned societies. He is Professor of Medicine in Queen's College, Birmingham, and President of the Council of the British Medical Association. Dr. Foster represented Chester in the last Parliament.

A medical man less known to fame who aims at a seat in the new Parliament is Dr. Joseph Francis Fox, of Queenstown, Cork, who stands as a Nationalist candidate for the Tullamore division of King's County. Dr. Fox is a native of Queenstown, thirty-three years old, and migrated at an early age to the United States, where he practised medicine and surgery in the neighbourhood of Troy (N.Y.).

Mr. Mitchell Henry, a Union-Liberal, who has been rejected at Glasgow, followed the medical profession from 1848 to 1862, being surgeon to the Middlesex Hospital during part of that time. He is now in business in Manchester.

Surgeon-General Sir Guyer W. Hunter, K.C.M.G., the newly returned member for Central Hackney, entered the Indian Medical Service in 1850, and served there for a quarter of a century, latterly being Principal of the Grant Medical College, and Vice-Chancellor of the University of Bombay. He has recently served on the Cholera Commission in Egypt.

Surgeon-Major George Evatt, M.D. (Gladstone Liberal), of the Army Medical Department, who was defeated at Woolwich, was born in 1843. He was educated at the Royal College of Surgeons, Dublin, and graduated as a surgeon and doctor of medicine with honours in 1863, entering the Army Medical Service in 1865.

Dr. Robert Farquharson, who stands for West Aberdeenshire in the Gladstone-Liberal interest, was born in Edinburgh in 1837. He was educated at the Edinburgh Academy and the University of Edinburgh, and took his M.D. degree in 1858. In 1859 he joined the Royal Artillery, but subsequently was appointed assistant-surgeon in the Coldstream Guards, and afterwards became medical officer to Rugby School. He has also been physician to the Belgrave Hospital for Children and to St. Mary's Hospital, and lecturer on materia medica in

the medical school of St. Mary's. He is a Fellow of the Royal College of Physicians, London, and the author of numerous medical works, including a guide to therapeutics, and a work entitled "Influence of Athletic Sports on Health." He retired from practice in 1880, and since then has represented this constituency.

Dr. J. E. Kenny, Nationalist candidate for the southern division of county Cork is a Dublin man. He was admitted a licentiate of the Royal College of Physicians and of Surgeons, Edinburgh in 1870, having received the degree of L.A.H. Dublin in 1868 from the Catholic University. He is a Fellow of the Academy of Medicine, Ireland, has been visiting surgeon to the North Dublin Union Hospital, visiting physician and medical officer of health to the North City Dispensary, and physician to the North Dublin Union Smallpox Hospital. He was arrested as a suspect, and dismissed by the Local Government Board, but he disputed their legal right to dismiss him, and was reinstated, receiving a testimonial of 1,000*l.* as an expression of public sympathy. Dr. Kenny represented South Cork in the late Parliament.

Dr. R. Macdonald, Gladstonian candidate for Ross and Cromarty, studied medicine at Edinburgh University, and took the degree of M.D. at Durham University. He has been in practice at the East-end of London for some time, and has held several public medical appointments. Dr. Macdonald is the son of a crofter, and represents the class from which he sprang. He commenced by studying for the Church, next devoted himself to medicine, and has now relinquished that profession for the law. The unsuccessful opponent of Sir H. Roscoe at Manchester, Mr. Peter Royle also follows the profession of medicine. Mr. Royle obtained the diploma of M.R.C.S. England, in 1843, and became M.D. St. Andrews in 1862. He has been President of the Manchester Medico-Ethical Association.

Dr. Lawson Tait, who came to grief in an attempt to carry the Bordesley Division of Birmingham in the Gladstonian interest, is of Scotch parentage, and was born in Edinburgh in 1845. He was educated at the University of Edinburgh, and is a Fellow of the Royal College of Surgeons, England, and M.D. of New York (*honoris causa*), &c. He is president of the Gynecological Society, Surgeon to the Birmingham Hospital for Women, and is declared by Professor Meinit, of Dresden, to be at the present time the most successful operator in the world in abdominal surgery.

Dr. C. K. D. Tanner (Nationalist, Cork County) is a Licentiate of the Royal College of Surgeons in Ireland, and of the College of Physicians.

Mr. E. C. Willis, Q.C., the unsuccessful Conservative opponent of Mr. O. V. Morgan at Battersea, is the eldest son of Dr. Thomas Willis, M.D., of Cambridge, and is another pervert from medicine to the law. He was born in 1831, and became a member of the Royal College of Surgeons, England, in 1852, and M.D. (Cambridge) in 1857. Subsequently he resigned the medical for the legal profession, and became a Q.C. in 1882.

Mr. Philip Vanderbyl, Gladstone Liberal, who failed to secure re-election at Portsmouth, was educated at the Edinburgh University, where he graduated with honours in medicine and obtained the gold medal. He has been President of the Royal Medical Society of Edinburgh, and subsequently a lecturer on anatomy and histology at the Middlesex Hospital. He retired from the medical profession in 1885, and is now a merchant and banker.

THE COLLECTION OF BARKS AND GUMS in the British Guiana section of the Colonial and Indian Exhibition has now been properly labelled and the exhibits placed in order.

Medical Gleanings.

POISONOUS GINGER-BEER.

At a recent meeting of the Aberdeen, Banff, and Kincardine branch of the British Medical Association, Dr. Presslie (who until graduation was a pharmacist) read an interesting paper on two cases (out of a series) of poisoning by fermented ginger-beer. In one case, that of a very temperate man in an easy situation, dyspeptic symptoms had lasted for two years, and the patient had lost much flesh. One day he was found shivering, having vomited a brownish substance, smelling of alcohol. The temperature rose gradually and then fell. The patient recovered, and resumed work. The vomit consisted of schizomycetes and saccharomycetes, which underwent the alcoholic, acetic, and butyric fermentations. Ginger-beer gave such a ferment, which would multiply with great rapidity. In both cases the patients indulged in this liquor. The similarity of the symptoms in these two cases, and their recurrence in seven days, was interesting; and their causation could not be referred to the alcoholic or acetic ferment, or *sarcina ventriculi*. Dr. Presslie is pursuing the subject.

NOTES ON NEW REMEDIES.

PURE TEREBENE still continues to be reported upon more or less favourably, and we notice that the collective investigation committee of the British Medical Association have received a large number of reports from all parts of the country. These when tabulated and reported upon at the Brighton meeting will, it is hoped, determine the place of the remedy in therapeutics. Dr. J. Hutchison (Shawlands, N.B.) speaks very highly of it (*British Medical Journal*, July 3), he having had but few failures with it in fifty-one cases of winter cough and bronchitis. We notice that he administered it in a way which has not previously been mentioned, viz. in cod-liver oil; but he did not find this method in any way superior to giving it on loaf sugar. Still, if cod-liver oil is a part of a patient's physic as well as terebene, there is no reason why they should not be combined.

COCAINE has been recommended as a topical application to the nostrils and eyelids in cases of hay fever. Remedies for this distressing complaint appear to crop up as regularly as the season for the trouble comes round. Dr. Paget (Great Crosby) is fully convinced of its efficacy; and as he himself is a sufferer and has benefited from its use, his testimony is all the better on that account. In his note on the subject (*British Medical Journal*, July 3) he recommends a 2-per-cent solution to be used with a small spray-producer, about 25 minims (half-grain) is sufficient at one time; spraying the eyes very slightly, with the lids half closed; and afterwards each nostril, passing the nozzle well into the aperture. In the same journal Dr. T. H. Moorhead (who has had thirty years' annual misery from the complaint) states that he has found the relief afforded by cocaine too transient and too slight to be of any practical benefit. These two statements do not at all agree, but it has already been observed that the quinine spray is an infallible cure for one person and an excitant to another. Dr. Paget never fails to obtain relief by a hypodermic injection of $\frac{1}{20}$ th of a grain of morphine combined with $\frac{1}{200}$ th of a grain of atropine.

URETHAN is another new remedy which is creating disappointments as well as giving good results. There was a discussion upon it at the last meeting of the Brighton and Sussex Medico-Chirurgical Society. Mr. F. J. Paley, who initiated the discussion, stated that he had found it to produce several hours of quiet sleep, and in five cases it completely failed. Three other practitioners reported failure only. In all these cases the patients appeared to have lost sleep owing to pain or disease. We have always understood that bodies such as chloral and urethan are not to be depended upon as pain-soothers, but that their proper use is as a sleep-producer in cases of mental worry and the like. According to the *Lancet*, M. Coze has investigated the physiological action of urethan on frogs, guinea pigs, rabbits, and dogs. He finds that it is antagonistic in its action to strychnia. It causes muscular relaxation and induces sleep; slows the pulse and the respiration, whilst lowering the temperature. It can be used hypodermically; it does not

disturb the secretions or the nutrition, and M. Coze recommends it for convulsions and in tetanus.

PARTHENIN, according to M. Guyet, is not a simple substance, but of complex nature, like scillitine and the amorphous digitalines. It does not appear to have any antipyretic action, but seems to be useful in some cases of neuralgia.—*Lancet*. [Various species of pyrethrum, such as *P. Parthenium*, are reported to be specifics against intermittent fevers, which properties would appear to reside in the bitter principles which they all contain.]

PLIGANINE is the name which has been given by M. Adrian to a new alkaloid which he has isolated from *Lycopodium saussures*. It has an alkaline reaction, and emits white vapours, like ammonia, in the presence of hydrochloric acid, and therefore appears to be of a volatile nature. It causes powerful emesis and catharsis.

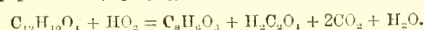
SALICYLATE OF BISMUTH.—Bismuth in the form of carbonate or trisnitrate is one of the few valuable remedies we possess. Dr. Solger now claims for the basic salicylate of this metal a special value in cases of diarrhoea and chronic intestinal catarrh. He administers about 20 grains every eight hours, and attributes its beneficial action mainly to its disinfectant properties. In some invalids, malaise, furred tongue, and abdominal pains are said to be caused by the drug, though a small dose of castor oil readily removes the toxic effects without requiring its discontinuance.—*Lancet*.

IODOL.—This body, which is an iodine substitution product of pyroline [C_6H_5N , iodol being C_6HI_2N], was introduced a year ago as a therapeutic agent analogous to iodoform, but presenting the advantage of being practically inodorous. Iodol is a greyish powder, and, as will be noticed from its formula, contains a large percentage of iodine, with which it parts readily on the application of heat. As the result of experiments to determine its value in ophthalmic surgery, Dr. Trousseau recommends an ointment, composed of vaseline 10 grammes, and iodol 2 grammes. A solution composed as follows: iodol, 3 grammes; alcohol, 35 grammes; glycerine, 62 grammes; a total of 100 grammes, is also a good form for application. Iodol, in powder, has been topically applied, but this will not do in eye cases, and the same applies to the plain alcoholic solution. The Paris correspondent of the *British Medical Journal* refers fully to Dr. Trousseau's experiments (page 1,229).

PIPERONAL.

THIS is an aldehyde, corresponding to piperonylic acid, obtained as a product in the oxidation of piperine. It occurs in the form of small, white, prismatic scales, possessing a strong odour resembling that of vanilla. A small quantity placed upon the tongue produces a sensation analogous to, but more persistent than, that caused by mint, and it is more irritating to the mucous surfaces than is the latter. It melts at about 125° F., and at a higher temperature volatilises without leaving any residue. When ignited, the flame and smoke resemble the appearance of burning camphor. It is insoluble in cold water, but in hot water it melts, and looks like drops of oil; it dissolves readily in alcohol and ether. Dr. Riccardo Friguani has made a number of experiments with this substance, as a result of which he states that it possesses both antipyretic and antiseptic properties. The antipyretic action is not of the most active or energetic kind, yet is sufficient in many cases. It is best given in 15-grain doses, repeated every two hours for three or four times a day, but much larger and more frequent doses are well borne. The most noteworthy disagreeable effects are nausea, eructations, and dryness of the throat. Its antiseptic action, however, the author states, is much more marked, and, since it is innocuous to the system, even when given in doses of $\frac{1}{2}$ to 1 drachm, he believes that it is deserving of a high rank among drugs of this class.—*New York Medical Record*.

[Piperonal is a derivative of piperic acid, which, in its turn, is prepared from piperine. When piperine ($C_{17}H_{19}NO_3$) is heated with alcoholic potash, a potassium salt of piperic acid ($C_{12}H_{10}O_4$) is formed. This may be separated and recrystallised. When acted upon with potassium permanganate, piperonal ($C_8H_6O_3$) is formed thus:—



Piperonal, as above stated, is an aldehyde, and by absorption

of another atom of oxygen yields piperonylic acid ($C_8H_6O_3$). The odour of piperonal is generally regarded as coumarin-like; it is sparingly soluble in cold water, more soluble in hot water, and crystallises from aqueous solution in prisms, sometimes an inch long. It is very soluble in alcohol. The body may also be prepared by acting on an alkaline piperate with bromine and dissolving out the piperonal with ether.—*Ed. C. & D.*

EUCALYPTUS OIL IN MALARIAL AFFECTIONS.

THIS oil has been little used internally; and although it is known to possess antiseptic properties, according to Dr. Lauder Brunton even more powerful than quinine, still advantage of these properties has hitherto only been taken in surgery. According to the same authority the old or oxygenated oil is more active than the new oil. In the *Therapeutic Gazette* for June, Dr. J. H. Musser, of Philadelphia, records results of twenty-eight cases of malarial affections which he treated with the oil in 10-minim doses, administered preferably on lump sugar three or four times a day; and although only nine cases completely recovered under the remedy, he believes that it is of material value in such affections, especially when quinine cannot be tolerated. The most important conclusions are that it has no specific value in any type of the disease, and quite failed in a case of puerperal malarial fever. It does not prevent relapses, although in one case a patient who had suffered frequent relapses under quinine had not had a relapse since he took eucalyptus three years ago. It is not so quick in its action as quinine, and is best given in 5-minim doses every three hours.

SAPONIMENTS.

THIS is the name given to a new class of medicaments, resembling opodeldoc, prepared by Dietrich, of Helfenberg, from neutral oil and stearine soaps prepared by dialysis. These soaps are dissolved in acetic acid and incorporated with such medicinal substances as are mostly used in dermatological practice. The saponiments can be prepared in the shortest time, and in the smallest quantity, are more constant than soaps, and contain the active principles in a more concentrated manner than these. In acute inflammatory diseases of the skin the saponiments cannot be employed; their proper place is in chronic, squamous, pruriginous, and parasitic dermatoses, in acne, ichthyosis, and especially in the affections of the hairy skin.

SURFATTED SOAPS.

CONSIDERABLE attention has been given lately by Continental dermatologists to saponaceous applications, and Dr. Unna, of Hamburg, one of the most original, as well as one of the most successful, dermatologists of the present time, has devised a class of preparations which he names "surfatted" soaps, that is, they contain an excess of fatty matter. The fatty basis is a mixture of refined beef tallow eight parts, and olive oil one part, the alkali being a mixture of soda and potash lye: from three to four per cent. of fatty base in excess is used. The proportions used are nine of the fatty mixture, three of soda lye, and 1.5 of the potash lye, both 38° Baume. These are to be digested at about 70°–80° C. until combination is complete. This soap is medicated with various substances, of which the following are the most useful:—*Marmor soap*.—Contains twenty per cent. of finest marmor powder, and is used in acne and all parakeratoses. *Ichthyol soap*.—Contains ten per cent. of sulpho-ichthyolate of sodium. Use: in all forms of rosacea. *Salicylic soap*.—Contains five per cent. of salicylic acid. Used in subacute and chronic eczematata, acne, and parasitic affections of the skin. *Zinc-salicylic soap*.—Contains two per cent. of oxide of zinc, ten per cent. of salicylic acid. Useful in eczema, seborrhoea, hyperhidrosis, and bromidrosis. *Rhubarb soap*.—Contains five per cent. of alcoholic extract of rhubarb. Use: in parasitic skin affections of a light type and intertrigo. Amongst other kinds are sulphur præcip. ten per cent.; potassium iodide, five per cent., and naphthol five per cent. Dr. Unna directs the affected portion of the skin to be covered with the lather of the soap and then to be rubbed with a dry towel. The greatest effect is, however, obtained by applying a thick lather to the skin and allowing it to dry without the use of water or towel.—From the *Therapeutic Gazette*.

[The introduction of lanoline would appear to afford an opportunity of extending this mode of treatment.]

Scientific Notes:

On Chemistry, Pharmacy, Botany, Materia Medica, &c., Original, Selected, and Translated.

SULPHO-VANADATE OF AMMONIA AS A TEST FOR ALKALOIDS.—As experts in a recent notorious case in France, when it was required to ascertain the presence or absence of colchicine, Messrs. Schützenberger and Vulpian have published their observations. The most interesting part of their memoir relates to their investigations with sulpho-vanadate of ammonia, a test suggested by M. Manfarmé, of the Dorpat laboratory (Professor Dragendorff's). With 1 part of this salt dissolved in 200 parts of monohydrated sulphuric acid pure colchicine gives a fairly intense green colour, changing rapidly to a violet brown. In order to see whether this reaction was special to colchicine among alkaloids the test was applied besides to veratrine, digitaline, pilocarpine, morphine, narceine, codeine, eserine, cocaine, caffeine, berberine, gelsemine, narcotine, kairine, brucine, strychnine, solanine, colchicine, curarine, arbutine, sabadilline, aloin, rheine, esculine, santaline, and igasurine. Of these the only ones which resemble at all the effect on colchicine are colchicine, a derivative of colchicine, which, as far as the authors could test it, resembled colchicine exactly in its reactions, a fact of scarcely any importance for their purposes; arbutine, greenish at first turning to dirty brown; aloin, green turning to brown; rheine, persistent green. These three substances are, however, distinguishable from colchicine in not giving a violet tint with nitric acid, 1.40, as the latter does.

ETHOXYCAFFEINE is caffeine in which one atom of caffeine has been replaced by oxyethyl (C_2H_5O). It forms white needle crystals, insoluble in water but slightly soluble in alcohol and ether. Dr. Dujardin Beaumetz has experimented with this substance and has reported upon its properties in the *Bulletin de Thérapeutique*. He finds it to possess marked sedative powers, and a much more successful remedy in cases of sick headache than caffeine, or than guarana or pautlinin, which owe their virtues to caffeine. Dr. Beaumetz advises a dose of 25 centigrammes ($3\frac{1}{4}$ grains) to be taken as soon as the symptoms of an attack appear. He records several instances of remarkable relief following this dose, refreshing sleep being quickly induced. A larger dose than the above is liable to produce cramps of the stomach, with nausea, and the insolubility of the medicine is a difficulty in the way of its administration. He gives it either in powder, in wafers, or combined with salicylate of soda, which promotes its solubility, and hydrochlorate of cocaine, which moderates its effect on the stomach. The following is a draught recommended by Dr. Beaumetz:—

Ethoxycaine	25 c. g. = 4 grs.
Salicylate of soda	25 c. g. = 4 "
Hydrochlorate of cocaine	10 c. g. = 1½ "
Aromatic water	60 g. = 2 fl. oz.
Syrup of maidenhair	20 g. = 5 fl. drms.

HOW TO MAKE LANOLINE.

GAWALOVSKI (Rundschau, Prag., 1886) proposes the following method for the preparation of lanoline:—The wool-washings are first passed through a fine sieve to get rid of mechanical impurities, and then through a convenient quantity of cut straw or sawdust; the solution is then treated with magnesium sulphate, and the resulting magnesium soap, containing also the cholesterin, is collected, well washed with water, then drained and allowed to dry by exposure to air. It is then treated with sufficient diluted hydrochloric acid to decompose the soap; a large excess of hydrochloric acid should be avoided, but sufficient added until a slight excess of acid is indicated, which is afterwards removed in the process. The resulting fatty scum, consisting of fatty acids and cholesterin, is drained and treated with petroleum benzin in a closed vessel, slightly warmed to about 85° F. to aid solution, and then filtered through flannel in a closed filter-press. The petroleum benzin is then driven off by evaporation or distillation, and to remove any remaining traces of hydrochloric acid the residue is treated with from $\frac{1}{10}$ th to $\frac{1}{4}$ per cent. of carbonate of magnesia, rubbed up with water, the mixture being then well washed with fresh por-

tions of water until the water washings are no longer milky from the presence of magnesium carbonate. It is again melted, filtered while hot through flannel, and when cold, water is incorporated, and the lanoline becomes white, hard, and smooth.—*Western Druggist*.

AUSTRIUM, A NEW METALLIC ELEMENT.—Austrium was discovered by the late Professor Linnemann, of Prague. It is said that the discoverer during his last fatal illness dictated the results of his experiments from his deathbed. The following are the more important facts concerning it. The orthit of Arendal contains, besides a large proportion of rare earths, iron, lead, copper, tin, arsenic, zinc, cadmium, tellurium, calcium, magnesium, aluminium, and a new metal, austrium (Aus.). To separate the latter from the other metals, the chloride which is obtained by digesting the orthit in hydrochloric acid should be dissolved in excess of caustic soda, filtered, precipitated at a moderate temperature with sodium sulphide, and again filtered. The filtrate is exposed to the air until it becomes carbonated, when a part of the austrium, together with some sulphur, is precipitated, while part remains in solution; this also is precipitated by evaporating, and treating with acetic acid and sulphuretted hydrogen; but for complete precipitation it is necessary to evaporate the filtrate to complete dryness; digest in water, and treat with sulphuretted hydrogen. The precipitate, however, always contains traces of lead and copper, and particularly zinc. The investigator was only able to study the behaviour of austrium towards reagents by mixtures of austrium with considerable quantities of other elements. The separation of zinc seems the most difficult of all. Like it, austrium chloride shows an excellent linear spectrum, which includes a sodium line. The violet lines differ in frangibility from the corresponding potassium lines. It is suggested that these correspond with some of the unidentified lines of the solar spectrum given in Angström's atlas.—*Monatschrift für Chemie*.

REDUCTION OF FERRIC SALTS.

The following simple plan is suggested by Mr. A. L. Beebe, of New York:—A strip of thin platinum foil about one inch square is perforated with pin-holes over its entire surface. It is then bent into the shape of a letter U, and its opposite corners are connected by short pieces of platinum wire, so as to form a sort of basket. In this is placed a piece of amalgamated zinc of convenient size, and the whole is suspended by a stout platinum or silver wire in the bottle containing the solution to be reduced. Another strip of platinum foil, about $1\frac{1}{2}$ inches \times $2\frac{1}{2}$ inches in size, is then dropped into the bottle in such a way as to lean against the wire supporting the basket and zinc without coming into contact with the latter. Galvanic action at once commences, and hydrogen is evolved in abundance from the surface of the foil, which never becomes amalgamated, as it comes into direct contact only with the zinc. When the reduction is complete the platinum basket containing the zinc is removed from the solution, washed in the titrating beaker, and laid aside, all danger of fracturing the beaker being thus avoided.

This is specially suitable in the determination of ferric iron by means of permanganate of potassium.

THE BITTER PRINCIPLES OF HOP.

In a paper contributed to *Bull. Soc. Chem., Paris*, H. Bungener rejects the common view that the resin of the hop strobiles is the bitter principle. This resin is insoluble in water, but a decoction of hops made with distilled water is quite as bitter as a decoction of malt in which an equal quantity of hops has been boiled. M. Bungener shows that the crystalline acid, first obtained in an impure state by Lermier, is really the bitter principle. This lupulic acid is insoluble in water, but its oxidation product dissolves rapidly in water, with the aid of heat, imparting to it an intensely bitter taste.

EXAMINATION OF OZOKERITE.

The following method has been proposed for examining crude ozokerite, from which paraffin wax is made. A hundred grammes of the substance is to be heated along with 20 c.c. of fuming sulphuric acid to a temperature of 170° — 180° C., when all volatile bodies are driven off, and their quantity may be determined by the loss in weight. To

determine the amount of hard paraffin in the residue, ten grammes of chlorinated lime are added to the mixture, and after action has ceased and the whole has been dried, a tenth of it is treated in a suitable apparatus with petroleum spirit (s. q. 600—800). After exhaustion is complete, the ether may be evaporated and the paraffin directly weighed; or the residue of lime and ozokerite may be dried, and the amount of waxy matter which it contained calculated from the difference in weight.

POPLAR WOOD contains a yellow colouring matter which is identical with that of *Erica vulgaris*. A decoction of the twigs dyes orange and yellow shades. The colouring matter may be obtained in a golden yellow powder by treating the decoction with alum.

AMMONIUM CYANIDE is formed when the silent electric discharge is made to act upon two volumes of nitrogen and one of methane. From the cyanide prussic acid can be formed.

SESAME OIL can with certainty be detected in olive oil by shaking for ten minutes 10 c.c. of the sample with 5 c.c. of hydrochloric acid (sp. gr. 1.16), containing 10 centigrammes of sugar in solution. Mr. Leonard Archbutt states that he has repeatedly detected one drop of sesame oil in 10 c.c. of olive oil, that quantity giving a distinct rose coloration to the acid, which separates on standing.

TOAD FLAX, OR SNAPDRAGON (*Antirrhinum Linaria*, L.), now an obsolete remedy, was throughout the middle ages accounted a highly valuable medical plant, as is shown by the many aliases under which it was known, such as *Herba urinalis*, *Herba hemorrhoidalis*, &c. It was formerly employed in medicine, internally as a purgative and as a diuretic, and externally as a fomentation. A tea made of the flowers was given against eruption of the skin, and, it is said, was used as a yellow dye. Milk in which the plant has been macerated is said to kill flies. The snapdragon bears a close resemblance to the spurge, or wild ipecac. (*Euphorbia Cyparissias*, L.), known to pharmacists under the name of *Esula adulterina*, but may be distinguished from it by the absence of milky juice in its stem. A German prince having been cured by his private physician by application of this herb showed his gratitude by promising to the medical man an annual present of a fat bull as his fee, and expressed a wish to know how the herb might be distinguished from *Esula adulterina*. He received the answer, "*Esula lactescit, sine lacte Linaria*," which one of the courtiers capped by the extempore remark, "*Esula nil nobis, sed dat Linaria taurum*."

THE PRODUCTION OF CRYOLITE.—Although cryolite is a product which is little known to the average business man, it has been an article of commerce for the last twenty-five years, but there is little probability of its ever surpassing its present dimensions. Cryolite, or "ice-stone," was first discovered about the year 1850 by the Greenlanders, who reported to the Danish officials that they had found, as they expressed it, "ice that would not melt." The mineral is not unlike washing soda. Analysis shows that it contains aluminium 13 per cent., sodium 32.8 per cent., and fluorine 54.2. Cryolite is used in the manufacture of soap, soda, aluminium sulphate, alum, and cryolite glass. It was first imported to the United States about twenty-five years ago, for use in the manufacture of soda. It is said that the Pennsylvania Salt Manufacturing Company is the only concern in America which uses this mineral. Last year about 8,000 tons arrived by five barks built specially for this trade. Previous to 1885 but four vessels were engaged in transporting it; but as the ships can only make two trips with safety—although one bark made three several years ago—it was found necessary to build a fifth, and on May 30 last another one was launched, making six vessels which will be engaged this season. The ships which carry cryolite are built much stronger than the average whaler, double planked and bows sheathed in steel, so as to be able to withstand the crushing force of the ice brought in by the current from the east side of Greenland, and which is floated down around the most southern point. Cryolite has been found in the Ural Mountains, but not in any quantity, and specimens have also been picked up at Pike's Peak. It is said that the Pennsylvania Company offered a large price for a ton if procured from that point, but it was impossible to find this quantity.

FRENCH PHARMACEUTICAL NEWS.

(From our Paris Correspondent.)

IS IT FLUORINE?—The results of M. H. Moissan's investigations have been communicated to the French Academy of Sciences. They are as follows:—When anhydrous hydrofluoric acid, carefully prepared according to Frémy's process, is in a U-shaped platinum tube, and at a temperature of 65° below zero, Fahr., submitted to an electric current of 50 Bunsen cells, the following substances are obtained:—(1) At the negative pole, hydrogen gas, easily identified; (2) at the positive a gas possessing the subjoined properties: In contact with mercury it is completely absorbed, and forms a light yellow mercurous fluoride. It decomposes water, and produces ozone. When phosphorus is introduced into the gas in question it takes fire, and forms phosphorus fluorides. Under the same circumstances sulphur becomes heated, and rapidly melts, while carbon apparently remains unaffected. Fused potassium chlorate is attacked in the cold, with evolution of chlorine gas. And, finally, crystallised silicium, previously washed with nitric and hydrofluoric acids, is, by contact with the gas, set on fire, and burns brilliantly, forming at the same time silicium fluoride. The positive electrode of iridio-platinum is deeply corroded, while the negative remains intact. M. Moissan declines as yet to draw any conclusions respecting the nature of the new substance thus obtained. It may be, he said, the long-sought-for fluor, or it may be a hydrogen perfluoride, or even a mixture of hydrofluoric acid and ozone. A committee appointed by the Academy reported on July 5 that they had witnessed Mr. Moissan's experiments, and their chairman, M. Debray, is preparing a paper on the subject for the next meeting.

SEVERE SENTENCES FOR ARTIFICIALLY COLOURING WINE.—Some time since wines coloured with a chemical known in trade as sulpho-fuchsine were seized in the hands of several wholesale wine dealers of Narbonne. They proved they had purchased the wines of M. Longueville, a large vintner, of the Hérault Department. He said he obtained the colouring stuff from M. Lignon, a dealer at Béziers, who himself had procured them from M. Ruch, a manufacturer of aniline dyes in Paris. The Lyons Correctional Tribunal, before which the case came up, found the Narbonne dealers not guilty, as they had acted in good faith, but sentenced Longueville to eight days' prison and a fine of 10,000f. (4000*l.*), Lignon to three months and 1,000f., and Ruch to fifteen days and 10,000f.

MEETING OF THE PARIS PHARMACEUTICAL SOCIETY.

At the regular monthly meeting, held July 7, after the approval of the minutes, a reclamation was read from M. de Vrij, respecting his communication in regard to sulphate of quinine. He complained that the official report made him recommend muriatic acid, instead of sulphuric, for obtaining the acid sulphate. He requested that the mistake be corrected. [The report of THE CHEMIST AND DRUGGIST had this important point at least correctly stated.] The request was granted, and the necessary emendation was ordered to be made.

A letter from M. Dreyer was read, calling attention to a contemplated injustice to the pharmacist in the projected military legislation. While the surgeon, and even the "officier de santé" (a sort of apothecary), when called under the colours, are given officer's rank, the pharmacist comes in only as a private. This is thought to be an oversight on the part of the legislators, though there are said to be evil influences trying on all occasions to snub pharmacy. A committee was appointed to take the matter in charge.

Sulphate of quinine came next for the usual discussion and controversy, but it looked as if at last a conclusion had been reached.

Mr. Jungfleisch, chairman of the committee appointed to investigate and report, said he had made experiments which convinced him that M. de Vrij was perfectly right, and that the assay process of the French Codex is quite reliable—in fact, more so than that of any other European Pharmacopœia—with only the slight correction that for the term "warm water" should be substituted "water at a certain temperature," and even this, as the sequel showed, is not very important.

The trouble with the critics of the Codex process for assaying sulphate of quinine is, according to M. Jungfleisch, that they have not operated with pure specimens of quinine sulphate, but have used what they supposed to be pure salt.

If you only had a mixture, made in a mortar, of quinine and cinchonidine sulphates, the temperature of maceration would be of slight consequence, but the commercial salt is of different composition; the two salts crystallise together, and form a combination. When you macerate this in cold water, you dissolve first all the cinchonidine sulphate, then less and less, in proportion as the sparingly soluble quinine sulphate accumulates outside, finally acting as a protective varnish. The more you heat the maceration water, the more cinchonidine you dissolve in proportion, and this makes the temperature appear of very great importance. Some one has spoken of supersaturation, but this cannot be accepted. You cannot have supersaturation in a liquor containing quantities of crystals floating about.

From M. Jungfleisch's experiments it appears that commercial sulphate of quinine, both French and foreign, is bad, and much of the evil comes from the demand for a light salt. A feather-light product cannot be obtained with pure sulphate of quinine. This is so true that once, less than two years since, during the cinchona cuprea supply, manufacturers had to add cinchonidine to the alkaloids extracted from these barks, because they contained an insufficient quantity to make the light salt demanded by commerce. At present the samples of quinine found on the market contain 8, 10, and 12 per cent. of cinchonidine; the highest percentage found by M. Jungfleisch was 16, although he did not wonder at the 18 per cent. reported by M. de Vrij.

The conclusions of the speaker were—(1) that M. de Vrij was right in saying that no light quinine sulphate can be pure, and (2) that all such should be rejected by pharmacists, who ought to insist upon manufacturers supplying them with a pure product under all circumstances. Also (3) that the Codex assay method is very good, even with the slight vagueness alluded to, as it exacts greater purity than does any other European Pharmacopœia. And (4) that the process in question—which is not exactly Kerner's process—will show 3 per cent. of cinchonidine, a degree of purity perfectly sufficient. Absolute purity is neither obtainable nor desirable.

Several members spoke, agreeing with M. Jungfleisch in the main, and thanking him for his important communication.

A vote having in the meantime been taken, M. Beauregard was declared elected a member of the Association.

M. Planchon said a few words about the new parasite of the grape-vine, the *erineum*, which is causing some damage in Burgundy, and M. Ferrand showed specimens of "China Sponge," the product of a cucurbitacea now cultivated in America under the name of Rag or Towel Plant.

M. Petit spoke of *narcein*, a chemical now noticed again, after having remained in oblivion since Claude Bernard gave it some fame as a hypnotic. M. Petit called attention to the discrepancies he had found in the descriptions given by those who had experimented with narcein. The descriptions were different, the solubilities widely unlike, so he had no doubt the experimenting physicians had dealt with substances probably far from identical.

To this M. Jungfleisch added that some time since, being astonished at the contradictory accounts given of cinchonidine by British army surgeons in India, and French physicians here, he examined a specimen of the chemical used to such advantage by the English practitioners, and found it to contain ten per cent. of quinine. Hence before physicians publish their experiments they ought to know what they are working with, and tell us what they are really speaking of when they relate the physiological effects of a substance.

The meeting adjourned at 4 P.M.

We learn from the *Australasian Journal of Pharmacy* that "quite recently the Pharmaceutical Society of Great Britain was forced to discontinue its opposition to the registration of objectionable trade-marks owing to lack of funds." To compress into one little sentence two such freaks of fancy as the Pharmaceutical Society opposing trade-marks, and the same respectable body on the verge of bankruptcy, is an effort of fancy which only the free breezes of our great Southern Continent could inspire.

Foreign and Colonial.

NEW FIRMS.—*C. Mentzel*, Altona, near Hamburg, drugs and chemicals. *E. Hollatz*, Berlin, drugs and chemicals. *Johann Orendt*, Kronstadt (Austria), soap and candle works.

THE FRENCH ARMY MEDICAL STAFF.—It is officially stated that the French army counts at present 490 military surgeons, 138 pharmacists, 438 veterinary surgeons, 431 officers charged with the inspection of victuals, and 340 inspectors of hospitals.

A NEW PHARMACY BILL has been prepared by the Pennsylvania Pharmaceutical Association. It provides that none but graduates in pharmacy shall continue in the drug business or hereafter engage in it unless examined and certified by a board of pharmacists appointed for the purpose by the Governor.

ALUMINUM IN OHIO.—Large works are to be built at Findlay, Ohio, for the production of aluminum from clay, using natural gas for furnace fuel. The clay from which the metal is to be extracted is brought from West Virginia, but great beds of it exist in nearly all the States and Territories. The cost of production is expected to be low and will help to bring the metal into common use.

A SULPHURETTED ATMOSPHERE.—On June 13 an accident occurred at the chemical works at Aussig, Austria, which resulted in the death of three employes. The man in charge of the department for the manufacture of sulphate of copper had his attention drawn from his work by two others who came up to speak to him. While talking he forgot to close the ventilator of the hydrochloric acid tube and to open that through which the sulphuretted hydrogen escapes. The poisonous gas filled the room, and when discovered the three men were quite dead.

AN IMITATOR OF DR. TANNER.—A man has appeared in Forlì (Romagna), who asserts that he has discovered in the course of his travels through a great part of Africa a sort of liquor, extracted from various herbs, which has the effect of "mummifying" the body, and rendering it insensible to any kind of want, such as hunger or thirst; while it will also admit of a person taking poison, however violent, without feeling any ill effects. At the request of Professor Peruzzi, of the Bologna Academy of Medicine, the man has started for that city, where he proposes to go through another course of fasting, and to take poison.

THE OPIUM CROP in Bareilly, Etah, Manipuri, and Fatchgurbh (Benares Agency, India) has suffered greatly from hail this season, and the crop is not expected to be more than 60,000 maunds, as compared with 74,000 maunds last year. The drug is also of much inferior quality. Unfavourable reports have also been received from the Patna Agency. The result of this is that the Government estimate of sales per month in 1887, viz. 5,000 chests of provision opium, is not likely to be realised. Apart from this the Chinese production of opium is now in a forward state, and, as far as can be judged at present, appears to seriously threaten the future of Indian finance.

MOHWA FLOWERS.—Writing to the *Indian Agriculturist* Mr. S. Datta contradicts Professor Church's statement that "a single tree may yield 6 to 8 maunds of flowers; even 30 maunds have been asserted to have been collected from one tree." He says, "Of course there are exceptions. Amongst the thousands of millions of human beings there is one only (William Ewart Gladstone) who could produce a Home Rule Bill. So amongst the many millions of Mohwa trees in Central India there may be a tree yielding 30 maunds of flowers in a single year. But the average yield of bearing trees will not, I believe, exceed 15 seers, in this subdivision at any rate. The average yield per village is about 40 maunds, of which half would be required for local consumption." He also suggests that the flowers may be profitably used in feeding cattle.

ITALIAN TARTARIC ACID.—A company has been formed in Italy, under the style of "*Società Appula*," for the erection and working of a tartaric acid manufactory at Barletta, on

the Adriatic, one of the centres of the Italian lees and argol industry. The company will work with a capital of 500,000 lire (20,000*l.*), and is now trying to place its shares, which are of 100 lire (4*l.*) each. The promoters of the undertaking anticipate large profits, and claim that their works will be able to undersell all foreign manufacturers, the carriage and duty on the acid being saved, and wages being lower in Apulia than abroad. But against these advantages it must be taken into account that coals and all substances required in manufacture are dearer in Italy than in England or Germany, and that refuse and by-products are more difficult to sell. Some four years ago extensive tartaric-acid works were erected at Castellamare, near Naples, and these works are seriously handicapped by the above-mentioned drawbacks.—*Chemiker Zeitung*.

PINUS AUSTRALIS.—The attempt to grow this pine in Southern India has not been attended with success. Mr. Gamble, the Conservator of Forests, Northern Division, writes that seed was distributed among the collectors of Godavari, Kistna, Nellore, Cuddapah, and the Nilgiris, with necessary instructions for careful experiment by the district forest officers in their districts. But from the reports received from the collectors, he finds that the experiment was a failure, the seeds having failed to germinate, except in Nilgiris, where only five have sprouted, though great care was taken and the instructions of the Government of India were carefully attended to. Seed was also distributed in the Hill districts, or in climates more temperate than that of Madras, such as Mercara, Coorg, the Shevaroy Hills, Bangalore, Travancore Hills, and Coonoor, but none of the seed was found to germinate, and it is believed that it had lost all vitality. A gentleman in Daman sowed some in his gardens and the surrounding villages in Surat without success. It would thus appear that the fault lay with the quality of the seed, and yet seeds of the Pine order have been known to preserve their vitality for long periods.

A NEW CUSTOMS TARIFF FOR ROUMANIA came in operation on June 9, and since that day the following duties in francs per kilogramme are charged upon articles pertaining to the drug and chemical trade:—Cinchona bark, 0.20*f.*; pharmaceutical preparations and compounded medicines, as well as all medicinal preparations in the form of powders, pills, pastilles, elixirs, syrups, ointments, oils, soaps, plasters, or in any other form, fluid or solid, medicinal wines and bath-salt alone excepted, 10*f.*; waters for toilet (eau de cologne), the teeth, &c., 1.20*f.*; toilet soap, pomatum, hair-oil and hair-dyes, smokers' powders, &c., 1.80*f.*. The following are charged per 100 kilogrammes: Medicinal wines, 180*f.*; artificial or natural mineral waters, 5*f.*; Glauber's or Epsom salts, 10*f.*; molasses or glucose, 15*f.*; sugar, crude (not refined or in syrup), 25*f.*; ditto, refined, in loaves, lump or ground, and candy, 35*f.*; beer, cider, and other drinks in cask, bottles, or jars, 30*f.*; distilled spirits of every description, sweetened or not sweetened, 100*f.*; wood or wine vinegar, perfumed, in casks, 20*f.*; ditto in bottles, 40*f.*. All other chemicals, and all dye and tanning materials and varnishes, as well as sulphate and valerianate of quinine, are admitted duty free.

Obituary.

DOWS.—Mr. G. D. Dows, of Boston, U.S.A., the well known bottler and manufacturer of soda-water apparatus, who came to England some twenty years ago as head of the firm of Dows, Clark & Van Winkle, to introduce American ice-cream soda into this country, died a few weeks since at his residence in Boston.

HOLMES.—On June 15, Mr. James William Holmes, chemist and druggist, Hull. Aged 31.

HOPTON.—On June 22, Mr. Edwin Hopton, chemist and druggist, Idle. Aged 46.

SAUNDERS.—On June 15, Mr. George Saunders, chemist and druggist, Peckham Rye, London. Aged 59.

WILLIAMS.—On April 5, Mr. Charles Williams, chemist and druggist, Uffculme. Aged 69.

Trade Notes.

THE MANX SHRUB COMPANY should be addressed, Ulverston, Lancashire, not Douglas, Isle of Man, as stated last week.

MESSRS. MCKESSON & ROBBINS, of New York, have opened a London office at 38 Mark Lane, where they are represented by Mr. Wm. J. Evans. Their coated pill business is not transacted at this office.

DRS. ROOT AND SLOCUM, of 181 and 183 Pearl Street, New York, have, with their representative Mr. Thompson, arrived in this country, and may meanwhile be addressed First Avenue Hotel, Holborn. They propose to manufacture their proprietary articles in London, and to open an office in the City.

OPALESCENT GLASS.—MESSRS. Hearn, Riddell & Co., of 381 Kingsland Road, E., have sent us specimens of jars and pots made of Opalescent Glass. They have quite succeeded in producing glass of uniform opalescence and of very smooth surface. The pale-blue glass is uniform in colour and of a very subdued tint. We understand that these goods are extensively used, and their handsome appearance and freedom from porosity are important factors in their favour.

MCKESSON & ROBBINS' COCAINE HYDROCHLORATE.—It was recently pointed out in this journal that crystallised cocaine hydrochlorate contains water of crystallisation, and that the anhydrous variety is amorphous. We have received from Messrs. McKesson & Robbins a sample of the salt in small crystalline granules which they assure us is absolutely anhydrous. We find it to be so, and that the crystals retain their form and purity after exposure in a drying-oven. The crystals dissolve readily, and are free from secondary products. We understand that the firm have secured in competition the U.S. Army Government contract for cocaine.

THE BRITISH HOP PACKING COMPANY, of Three Crown Square, Borough, have commenced to supply hops in very convenient compressed packages. The hops are first compressed by hydraulic machinery and then cut, as from a silo, into blocks of the proper weight. In this form, being comparatively free from atmospheric influences, the natural aroma and tonic bitter value of the hops is much more perfectly preserved than if they are kept loose in the pockets. In the packed form they offer a convenience for chemists who may have a demand for them either for medicinal or home-brewing purposes. They are supplied in packages varying from $\frac{1}{2}$ lb. to $\frac{1}{2}$ cwt. As an indication of the amount of pressure applied, it may be stated that the 2-lb. packet measures only $6\frac{1}{2}$ by $4\frac{1}{2}$ by $3\frac{1}{2}$ inches.

MESSRS. W. J. BUSH & Co. have received a remarkable testimonial in favour of their English-drawn sandal-wood oil from Dr. Brown Henderson, of Glasgow, who states that in using it in cases of gonorrhoea he has been singularly successful. The oil disagreed with no one, and it only did not succeed when the doses were too small. Dr. Henderson is a well-known authority in the North. Recently attention has been called to the very variable nature of the sandal-wood oils of commerce. Apart from several substitutions, such as cedar-wood oil and Venezuela oil, there has been some dubiety about oils which have undoubtedly been derived from santalum species. It was this dubiety which led Messrs. Bush & Co. to institute inquiries in India regarding the actual conditions of supply. As has recently been pointed out in this journal there are many varieties of sandal-wood which reach our markets, most of them being taken as oil-producing woods, and frequently used as such. By an arrangement which they have come to Messrs. Bush & Co. receive periodically supplies of wood from one plantation, whose area is not so extensive as to permit any marked difference in climatic and other influences which tend to induce differences in plant products. The oil which they produce is of a very uniform character. It has a specific gravity of 0.976, at 16.5° C. is soluble in less than its own volume of rectified spirit, and responds to the recognised tests for true sandal oil. It has a pale golden colour, is free from fluorescence, and possesses a very delicate aroma. The fact that Dr. T. B. Henderson, of Glasgow, who first called attention to this remedy, speaks highly of this oil is the best proof of its therapeutic activity.

BANKRUPTCY REPORTS.

SPRINGBANK CHEMICAL COMPANY, Kirkintilloch, N.B.

At the Glasgow Bankruptcy Court, before Sheriff Lees, on June 29, the Springbank Chemical Company, trading as manufacturing chemists at Bellfield, Kirkintilloch, and George Macfarlane, and Thomas Brown Auchterlonie, the individual partners of the firm, were examined in bankruptcy. Mr. Macfarlane in examination said he began business twenty-seven years ago alone, under the name of the Springbank Chemical Company. He also carried on another business at the same time as a warehouseman. In 1865 he took Mr. Auchterlonie into partnership. Mr. Auchterlonie put 1,500*l.* into the business. Mr. Auchterlonie was to have a fourth of the profits. In 1870 there was a re-arrangement of the contract of copartnership, by which Mr. Auchterlonie was to get a third of the profits, but Mr. Auchterlonie's drawings were restricted to 300*l.* They had a fair trade in 1870, but owing to the bad state of the farming interest, they had been steadily losing since 1875. Since that time they had lost 5,235*l.* 7*s.* 11*d.*, while their profits had been 2,679*l.* 19*s.* 8*d.*, which was a loss during the eleven years of 2,555*l.* 8*s.* 3*d.*, or an average loss of 232*l.* 6*s.* 2*d.* a year. At the time of the failure bankrupt had a sum of 6,400*l.* at the credit of his capital account. Mr. Auchterlonie had at his debit 7,470*l.* 15*s.* 9*d.* The state of the affairs of the company showed liabilities 9,823*l.* 7*s.* 1*d.*; assets, 4,720*l.* The diet was adjourned until July 21.

BYRON BLEWITT, 73 Adelaide Road, Hampstead, and 120 Leadenhall Street, E.C., Surgeon.

MR. H. BROUGHAM, one of the Assistant Official Receivers, presided on Monday at the first meeting of creditors under this failure, which took place on June 4 last. The accounts filed show liabilities of 2,274*l.* 1*s.* 4*d.*, and assets 653*l.* 10*s.* 1*d.*, and the Official Receiver reports that "the debtor commenced practice in 1871; in 1879 was adjudicated bankrupt, liabilities 3,925*l.* and assets 45*l.*; discharge granted August 1882; for the past few months his business has been carried on under a scheme (proposed by his principal creditor), for the discharge of his liabilities. The debtor attributes his present failure to losses by speculation on the Stock Exchange, the sum of 1,189*l.* 9*s.* being a balance due on Stock Exchange transactions. The debtor has only kept a diary and ledger containing the accounts with his patients. He has not kept a cash book, creditors' ledger, expenses accounts, accounts of his Stock Exchange transactions, nor a profit and loss account, and no balance sheets have been made out. Consequently, his transactions and financial position are not sufficiently disclosed." The debtor was questioned at some length as to his affairs, and in reply to one question he said he attributed both this and the last failure to Stock Exchange speculations. He offered a composition of 5*s.* in the pound secured, and this was subsequently increased to 6*s.* 8*d.* The chairman said it would be a waste of time to entertain the offer; the Court was not likely to approve any scheme after the admission that both failures were due to Stock Exchange speculations. In the end the composition was rejected, and Mr. Woodthorpe was elected trustee to wind up the estate in bankruptcy, under the supervision of a committee of inspection.

C. EVANS, West Street, Cambridge Heath, Mineral Water Manufacturer.

THE accounts filed under this failure show liabilities of 1,021*l.* 15*s.* 8*d.*, and assets 240*l.* 18*s.* 8*d.* The debtor has carried on the business for seven years, and the failure is attributed to losses through various causes. The stock-in-trade, plant, &c., has been valued as a "going concern" at 496*l.* 7*s.* 6*d.* An order has been made for summary administration.

LADY (to applicant)—"What wages will you expect as nurse?" Applicant—"Howould is the babbie, mum?" Lady—"Seven months." Applicant—"Widout laudanum, mum, two dollars an' a half a wake; wid laudanum, two dollars."



PARTNERSHIPS DISSOLVED.

- CARR, J., & Co., High Holborn, chemists, as far as regards J. Carr.
 COATES BROTHERS & Co., Fann Street, City and elsewhere, printing ink and varnish manufacturers, bronze and colour merchants, &c.
 FLETCHER, W., & B. H. HERBERT, Uttoxeter, surgeons.
 HANBURY & Co., Taunton, aerated-water manufacturers, brewers, &c.
 JOHNSON, S. H., C. C. HUTCHINSON, and N. NUTTER, New Broad Street, City, manufacturers of patent carbon paper filters, &c., under the style of the Patent Carbon Paper Filter Company, as far as regards N. Nutter.
 MILTON CHEMICAL COMPANY, Glasgow, soap manufacturers, as far as regards Jenny Stuart Mills, or MacGowan.
 WILSON & RU-SELL, Skipton, surgeons.

RECEIVING ORDERS AND DATE OF PUBLIC EXAMINATION.

- BRAY, EDMOND SELWYN, Smart's Buildings, Holborn, mineral-water manufacturer. August 4. Lincoln's Inn Fields.
 BRIDGEWATER, EDMUND LAMBERWHELE, West Bromwich, chemist and druggist. July 26. Oldbury.
 SALT, ASHTON TROW, Birmingham and King's Norton, formerly surgical machinist, now manager. July 27. Birmingham.

ADJUDICATIONS.

- KIMPTON, FRANCES, High Holborn and Tufnell Park Road, medical book-seller.
 SALT, ASHTON TROW, Birmingham and King's Norton, formerly surgical machinist, now manager.

ORDER ON APPLICATION TO APPROVE SCHEME.

- LEWIS, DAVID, Saundersfoot, Saint Isell's, Pembrokeshire, chemist and druggist, &c.

NOTICE OF DIVIDEND.

- TASKER, ROBERT BRANTON, Bryn Menai, Menai Bridge, Anglesey, dentist. First and final dividend of 2½d., July 10. Official Receiver's Offices, Chester.

TRADE-MARKS APPLIED FOR.

THE *Trade Marks Journal* publishes the following notice:—"Any person who has good grounds of objection to the registration of any of the following marks may, within two months of the date of this journal, give notice in duplicate at the Patent Office, in the form 'J,' in the second schedule to the Trade Marks Rules, 1883, of opposition to such registration." All communications relating to patents, designs, or trade-marks to be addressed to H. Reader Lack, Esq., Comptroller-General of Patents, Designs, and Trade-marks, Patent Office, 25 Southampton Buildings, Chancery Lane, London, W.C.

From the "*Trade Marks Journal*," July 7, 1886.

- "HONELINE," in script; for toilet preparations. By Catherine Cochrane, trading as "Marette," 73 Earlly Crescent, South Kensington. 45,355.
 "DUCKETT'S 'SAFETY' CRYSTAL CARBOLIC ACID," and oval trade-mark on oblong label; for carbolie acid. By J. B. Duckett, trading as Duckett & Co., 184 Victoria Street, Hecley, Sheffield. 50,313.
 DESIGN, circle with diamond within, and the letters X. L. N. T.; for paints, pigments, and glue. By J. & J. Drysdale & Co., 101 Leadenhall Street, London. 51,524.
 DESIGN, in form of circular label, with roseate appearance, names of essences within spaces, and "Ess affix" in central circle; for preparations for temperance beverages. By J. H. Kendal, Blagdon Street, Blyth. 51,536.
 PICTURE, representing a child on the shoulders of another, and word "Motio" (51,773); same, with word "Moto" (51,774); and also with words "Vegetable Moto" (51,775); for medicinal preparations. By James Crossley Eno, Hatcham Fruit Salt Works, Pomeroy Street, New Cross Road, London.

"DIAMOND STAR," within a stellate design; for vegetable, animal, and mineral substances. By R. W. Harrison & Co., Darwen Street, Blackburn. 52,018.

FIGURE of the thoracic cavity, showing lungs; for a patent medicine. By Johnson Brothers, 93 Wellington Street, and elsewhere, Leeds. 52,037.

"MARVEL WASHER" on figure resembling a stamping block; for common and perfumed soaps. By Hazlehurst & Sons, Camden Soap and Alkali Works, Runcorn. 52,120-52,121.

"ASTHMAFUME," for medicinal preparations for asthma, &c. By Edwin Worth, 40 Old Christchurch Road, Bournemouth. 52,133.

"SOUTHALL'S AL CASTOR OIL," for castor oil. By Southall Brothers & Barclay, 17 Ball Street, Birmingham. 52,323.

"CRYSTAL CLEAR," and drawing of a pair of scales, with "The Balance" on scroll, and other words; for starch. By F. Rosenthal & Co., Dunster House, 12 Mark Lane, E.C. 52,433.

FIGURE of the Colossus of Rhodes, with "Colossus bleaching" and other wording; for bleaching preparations. By Dewhurst & Co., Newton Heath, Manchester.

"MALVERINA," for Mineral and aerated waters. By W. & J. Burrow, Great Malvern, Worcester, and elsewhere. 52,502.

"TUTEUR'S GLUE FOR BELTING, &c.," and drawing of wheel and belt; for glue. By E. Tuteur, 72 Mark Lane, London. 52,508.

COAT of ARMS, consisting of leopard, elephant, and sun; for perfumery. By F. C. Calvert & Co., Bradford. 52,525.

"DOBSON'S FAMOUS BLACK-LEG POWDERS," in Oxford border; for veterinary preparations. By G. Dobson, 18 High Street, Leicester. 52,534.

DESIGN, consisting of four arrows within a circle, without wording; for chemical substances (52,575); manures, disinfectants, &c. (52,576); pharmaceutical preparations (52,577); candles, soaps, &c. (52,578); and perfumery (52,580). The same with "Pure Carbolic Acid;" for perfumery (52,579). By F. C. Calvert & Co., Bradford, near Manchester.

"MARVEL CLEANSER," on block as above mentioned; for common and perfumed soaps. By Hazlehurst & Sons, Camden Soap and Alkali Works, Runcorn.

HOMŒOPATHY.

MAJOR VAUGHAN MORGAN'S prize for the best essay on "Medical Treatment, with Special Reference to the Scientific System of Hahnemann," which was advertised in this journal, has been awarded to Dr. J. D. Hayward, of 146 Grove Street, Liverpool.

NITRO-GLYCERINE AND THE HOMŒOPATHS.—Quoting from the report on Explosives published by H.M. Inspector the reference to the recognition of nitro-glycerine as a medicine in the British Pharmacopœia, the *Homœopathic World* particularly notes the remark that "it has been irregularly employed for some years," and comments as follows:—"The word 'irregularly' evidently refers to the use made of the drug by homœopaths before it was 'discovered' quite recently by Dr. Murrell—an achievement for which he was presented by a sagacious French Society with a gold medal—of which we hope he is properly proud. But the word 'irregularly' and its evident meaning proved too much for the equanimity of the *Lancet*. It has been used in 'legitimate medicine' and on 'well-established principles,' cries the much-flattered journal, for the last six or eight years! Yes, Dame *Lancet*, it has been used on 'well-established principles' any day these thirty years, since Hering and Dudgeon and others proved the drug. But the 'well-established principles' are the principles of Hahnemann, and the 'legitimate medicine' is that practised by Hahnemann's followers; and the fact that certain modern re-discoverers of established homœopathic truths have appropriated the drug, and that the British Pharmacopœia has sanctioned their action, cannot deprive homœopathy of the honour of introducing it into practice. Her Majesty's Inspector of Explosives appears to be well aware of this, and it is not likely that the perturbation of the *Lancet* will alter his opinion."

Trade Report.

It should always be remembered that prices quoted in this section are as nearly as can be ascertained the lowest that are actually paid for bulk quantities. Considerable allowances have to be added in many cases before ordinary prices can be ascertained, and for many drugs it must be recollected the range of quality is very wide.

MINCING LANE, July 9.

THE week has not brought any improvement in trade. What with stock-taking just over and the general election proceeding, the Mincing Lane market is in a very unsettled condition, which the failures in the chemical trade consequent upon the collapse of Messrs. James Gibbs & Co. have not tended to improve. Not only the chemical, but also the East India trade has suffered through this failure, and besides, it became known on Monday that Messrs Green & Pitt, of Dunster House, Mincing Lane, brokers of colonial produce, had suspended payment. It is reported that this firm, which has been established some nine years, has suffered through fluctuations in sulphate of quinine, citronella oil, &c., which have of late seriously declined in price. The extent of the liabilities is not yet given, and on the part of the firm it would appear to have been stated that they expect to be able to satisfy their creditors to the full.

Meanwhile Messrs. Lambert & Strong, late with Messrs. Green & Pitt, have opened business on their own account as colonial and produce brokers at Dunster House, Mincing Lane, and the drugs which were advertised for sale by Messrs. Green & Pitt were actually sold by the new firm. Mr. Lambert upon making his *début* was well received.

The drug sales proceeded with extreme languor. At times—for instance, when some parcels of sulphate of quinine came on for sale—the room was well filled, but during the greater part of the time scant attention was paid to the presiding broker.

ACID (CITRIC) has maintained its position, but the price has not advanced, 2s. 4½d. per lb. being still the quotation on the spot.

ACID (TARTARIC) steady at previous prices, viz. 1s. 8½d. to 1s. 9d. for English, and 1s. 7¾d. per lb. for foreign.

ALOES.—No sales of *Socotrine* took place on Thursday: of *Cape* there were 107 cases offered, about one-fourth part of which was sold at slightly easier rates, viz. 22s. to 32s. 6d. for fine, hard, bright; 23s. to 26s. for very soft to hardish but drossy, and 13s. for very ordinary quality. *Curaçao* aloes were plentifully offering, especially those run in gourds, of which there were 578 packages. For this variety there is no demand at all: good quality of dark colour and opaque appearance is held at 77s. 6d. per cwt. *Curaçao* in boxes sold fairly well, owners having moderated their pretensions: 49s. to 50s. was paid for dark liver, 30s. to 43s. 6d. for partly burned to good *Cape* character. Fine pale orange liver held at 110s. per cwt.

AMBERGRIS.—Four tins were offered, among which was one of very fine grey colour and delicate flavour, which is held at 105s. per oz. Another tin, ¾ dark and undeveloped, ¾ grey, was knocked down at 75s. per oz.

ANTIMONY remains without change, and in a very neglected condition. For public sale 10 tons of superior quality, smelted in Borneo, were advertised, but withdrawn.

BAEL FRUIT.—A few parcels good pale quarters, newly imported, sold at 3d. per lb., but 80 bags really fine, pale, split fruit remained unsold, and are held at 4d. per lb.

BALSAMS.—For *Capivi* the inquiry has been decidedly slack, Maranham being, we understand, the only variety in which there is anything doing; but even of this description 9 cases, offered in sale, met with no offer. *Peru* liberally offering, but without inquiry; 5s. 3d. per lb. remains nearest value. *Tolu* still abundant.

BUCHU LEAVES.—Quite neglected.

CHAMOMILES.—Reports state that the crop in Southern Germany appears to warrant higher expectations than were

entertained at first. Stocks from last year are small, and it may be that an increased demand at this moment would cause an improvement in the price, which at present is very low. In public sale 6 bales good whitish, double flowers, fetched 50s. to 51s. per cwt.—a good price.

CANELLA ALBA.—Nine packages very broken bark, partly damaged, bought in at 38s. nominally. With the late increase in supply the demand for this article has slackened.

CALABAR BEANS.—More attention has lately been paid to this article, about 40 packages having recently changed hands at Liverpool. The price did not transpire.

CANNABIS INDICA.—Of 25 bales, green colour, but consisting two-thirds of stalk, 10 were sold at 3d. per lb.—a low price.

CARDAMOMS.—A total supply of 132 packages which was catalogued met with less inquiry, and sold partly at cheaper rates. *Ceylon-Malabar*, at 2s. 1d. to 2s. 3d. for bold, heavy, pale but rather skinny; 1s. 10d. to 1s. 11d. for good longish pale; 1s. 6d. to 1s. 8d. for fair palish to yellow; 1s. 3d. to 1s. 4d. for small, partly dark. *Tellicherry*, bold palish to medium sized and rather darkish, 1s. 11d. to 1s. 3d. *Aleppcy*, good bold, but partly country-damaged, at 2s. 2d. per lb. (a good price); ditto, small, at 1s. Some seed sold at 1s. 6d. per lb.

CASCARILLA BARK.—One lot rather ordinary quality sold at 24s.; others held at the same price.

CHEMICALS (VARIOUS).—Messrs. Howards & Sons in their July price-list have lowered their quotations for the following preparations:—*Acid. borac. pur.* 41s. 6d. per cwt., *Refined Borac.* 29s. per cwt., *Cinchonidine sulph.* in tins 4d. per oz., in vials 6d. per oz., *Cocaine cryst.* in 1 gramme tubes 1s. 9d., ditto *hydrochloras* 1s. 3d., *Ferri sulph. gran.* P.B. 20s. per cwt., *Hypnone* 4s. per oz., and *Quinine sulph. solub.* 2s. 7d. per oz. *Calomel* has been increased to 2s. 8d. per lb.

CIVET.—One horn of good quality was sold at 7s. per oz.

COCA LEAVES are quite neglected, and very little is being done in the article. 1s. per lb. is asked for 7 bales fair greenish leaves.

CODEIA.—Slightly easier in value.

CANTHARIDES.—Quotations are lower in consequence of apparently well-founded reports of a prospective abundant crop in Eastern Europe. In public sale 6s. 9d. was paid for rather broken and dusty green flies.

ERGOT OF RYE.—Very quiet; 25 bags *Russian*, partly sold cheaply at 8½d. for fair but small. *Spanish*, 3 bags offered but not sold.

FLOWERS.—*Insect*.—For the “closed” flowers higher prices are now asked in Trieste.

GALLS.—Sixty-six bags blue *Turkey* all bought in with the exception of 6 bags very small galls, which realised 40s. per cwt.

GUM AMMONIACUM.—Seventy-four cases were catalogued, among which there was some very good gum. In all, 21 cases found purchasers, mostly at cheap rates; 24s. 6d. to 24s. for fair quality mixed with dark and rather blocky; 20s. for pale, clean siftings. A parcel of low cindery stuff was put in at 9s., and, in their eagerness to secure a bargain, buyers drove it up to 20s. 6d., proportionally an extreme price.

GUM ARABIC.—The auctions held last week went off quietly, the demands being slow for most qualities. *Amrad.*—A parcel of low clinkery Egyptian met no offers and was withdrawn. *Australian.*—11e newly arrived parcels were not ready. One or two small lots brought the previous value. *E. I. Gums.*—*Aden* sorts were withdrawn. *Amrad.*—A parcel of pale siftings brought 82s. per cwt., but ordinary classes showed a decline of 2s. to 3s. per cwt.; reddish, part blocky, selling at 40s. to 42s. *Ghatti* sold steadily, good pale at 50s., middling to fair at 38s. to 45s. according to quality. A parcel of *Oomra* sold cheaply at 47s. per cwt. *Turkey gums* were all bought in. Privately, middling rather dusty sorts are offering at 8l. to 8l. 5s. per cwt.

GUM BENJAMIN.—*Siam* variety liberally offered; one case of exceptionally fine, bold, loose almonds realised 35l. 10s., and 5 cases good blocked thirds were taken for export at 14l. *Sumatra*, ordinary, false packed III. limited at 105s. per

ewt., and fair almondy II. *Penang* sold at 8*l.* 5*s.* to 8*l.* 10*s.* Good almondy *Palembang* is held at 6*l.* 10*s.*

DRAGONSBLOOD.—The few lots sold realised a rather better price, viz. 8*l.* 5*s.* for good bright cakes, and 7*l.* 10*s.* for partly bricky and partly good red cakes in reed.

GUM ELEMI.—Seventeen cases rather dirty yellowish gum are held at 30*s.* per cwt.

GALBANUM.—One case yellowish, part block, part broken, realised 1*s.* 3*d.* per lb.

GAMBOGE.—Forty cases have been placed in sale, and were partly disposed of at low prices: 11*l.* for good, bright, partly blocked pipe; 10*l.* 10*s.* for fairly good, broken pipe; dull coloured pipe, 10*l.* 5*s.* to 10*l.* 7*s.* 6*d.*; and ordinary, block gum, 9*l.* 7*s.* 6*d.*

GUAIAECUM.—A fresh supply of excellent gum was offered in sale on Thursday. It consisted of 37 boxes, of which only 10 remained unsold. The rest realised very good prices, viz., 1*s.* 4*d.* to 1*s.* 8*d.* for good to very fine bright, and 4*d.* to 11*d.* for very ordinary stony to fair, partly drossy.

GUM MYRRH.—7*l.* 10*s.* per cwt. is the price paid for good pale Aden gum, 9*s.* 6*d.* for rather dark, partly stony sorts, 7*s.* 6*d.* for good clean siftings, and 39*s.* for common pickings.

GUM SANDARAC.—Fifty casks pale yellow gum to pickings sold at 60*s.* to 25*s.* per cwt.

HONEY.—There has been a fair demand privately for the cheaper varieties, and in response to this inquiry 446 packages were placed in sale on Thursday. But the buyers were unwilling to pay the prices asked, and only a few packages *Jamaica*, of ordinary quality, sold at 15*s.* to 19*s.* 6*d.* per cwt.

IGNATIUS BEANS held at 1*s.* 6*d.* per lb.

IPECACUANHA.—Of the small supply only 5 packages found purchasers, 3 bales fine hand-picked, well-annulated root at 4*s.* 3*d.*; and 2 serons fair, rather thin to good stout root at 3*s.* to 3*s.* 4*d.* per lb.

JALAP.—4½*d.* per lb. is the price now realised by damaged and mouldy tubers.

KAMALA.—3½*d.* refused for a parcel of very ordinary quality, which is held at 4*d.* per lb.

LEAVES (VARIOUS).—*Henbane* and *Belladonna*.—The weather this year has been so unfavourable to the cultivated crops in England, that prices have already considerably advanced.

LIME-JUICE.—Twenty puns. *Jamaica* bought in at 1*s.* 4*d.* per gallon, nominally.

LIQUORICE PASTE.—From Liverpool we hear that the Smyrna brands VB and BX are without alteration; the former selling at 43*s.* 6*d.* to 45*s.* per cwt., and the latter at 46*s.* to 47*s.* according to quantity.

MATICO.—Fifteen bales dark dust, mixed with stalk, are held at 2½*d.* per lb.

MUSK.—There was a good supply, but the demand was comparatively slack. *Tonquin* musk, first pile, small to bold pods, somewhat dampish, thin skin and underskins, 70*s.* per oz.; ordinary old-fashioned, skinny, Yunnan character, at 60*s.* per oz.; fairly good third pile, at 20*s.* per oz.; and good bold Russian *Cabardine* pods, at 20*s.* per oz.

MACE PASTE.—A case was sold at 2½*d.* per oz.; another is held at the same price.

NUX VOMICA.—Thirty bags of very ordinary quality and old import sold, without reserve, at 4*s.* per cwt.

OPIMUM.—Markets are quieter, and merchants in Smyrna seem desirous to realise at late rates; although without authentic reports of the present crops, prices are not expected to advance.

OILS (ESSENTIAL).—*Cassia* of very good quality is held at 2*s.* 8*d.* per lb.; an offer of 1*d.* less was refused, although the broker seemed to be anxious to sell; another lot of very fine bright oil is held at 2*s.* 9*d.* per lb. Two cases fine pale *Cinnamon* sold at 6½*d.* per oz., and a bottle sediment at 3*d.* per oz. Ten drums freshly imported *Geranium* withdrawn. *Lemon*, a few packages offered, but not sold. Two cases (each of 12 bottles at 21 oz.) "*Fisher's*" *Nutmeg Oil* were

bought in at 6½*d.* per oz. nominally. *Peppermint*, HIGH brand, held at 16*s.* per lb. *Aniseed*, firmer. *Caraway*, slightly easier. *Neroli*, generally expected in the South of France to be deficient in quantity this year.

OTTO OF ROSES.—Mr. R. C. Treatt informs us that he has just obtained from Bulgaria the return of the crop for 1886. It amounts to 68,750 oz. (Turkish), which compares with 72,050 oz. which was the official return in 1885. Exporter's price will probably be declared at Kezanlik in the course of next week, but Mr. Treatt does not expect it will be advanced. Messrs. Ihmsen quote at present 24*s.* to 24*s.* 6*d.* per lb. for their brand. It should be stated that Kezanlik advices from another quarter say that owing to the drought in the early part of the year the yield is certain to be small, and that prices are slowly but steadily advancing in all directions.

OLIVE OIL.—Advices from Naples state that fine hot weather prevails there, and the outlook for the crop is all that can be desired. In other parts of Italy the trees bear abundant fruit and are in excellent condition. Present estimates are for one-half to two-thirds of a full crop on the aggregate against one-third to one-half last year.

A fair quantity of oil is being shipped on old contracts to England and Russia, and some new business has been done, although the export demand is far from active.

At Naples the market has been very steady throughout the past fortnight at about last quotations, with very little doing, as speculators on both sides were anxious to have a clearer insight as to crop prospects before entering into further transactions, but at this moment sellers are more pressing, and the market closed weaker. In London there is very little doing except in *Mogadore*, which has changed hands at 32*l.* to 32*l.* 10*s.* In Liverpool the following prices are quoted: 38*l.* to 38*l.* 10*s.* for *Spanish* and *Taranto*, 34*l.* 10*s.* to 36*l.* for *Smyrna*, and 39*l.* 10*s.* per tun for *Candia*.

OILS (FIXED).—*Castor.*—Thirty cases new Italian sold cheap at 4*d.* per lb. *Calcutta* KB2 is held at 2½*d.* per lb. 50 drums *Wood oil* nominally bought in at 4½*d.* per lb.

PAIREIRA BRAVA.—Genuine root is very scarce just now.

PATCHOULY LEAVES.—Six bales of ordinary, dull, and stalky quality are held at 9*d.* per lb.; an offer of 8½*d.* per lb. was refused.

QUICKSILVER.—The importers' price is now 7*l.* per bottle, at which the article is firmly held.

RHUBARB very flat. One hundred and fifty six cases were offered, but only one was sold, viz. bold Canton, dull coated, and slightly country-damaged, at 1*s.* 2*d.* per lb.

SARSAPARILLA.—Prices are maintained, but very little is doing in the article. The last sales included grey *Jamaica*, good, sound root, 1*s.* 10*d.* to 1*s.* 11*d.*; country-damaged ditto, 1*s.* 9*d.* per lb.; *Honduras* "Crown" at 1*s.* 5*d.*; other marks 1*s.* 2*d.* to 1*s.* 3*d.* per lb.

SEEDS (VARIOUS).—*Anise* is in limited request, although previous prices are maintained. Russian seed is worth 29*s.* to 30*s.*, and Levantine 40*s.* to 48*s.* per cwt. ex warehouse. Trade in *Canary* has been rather quiet; the considerable quantities which changed hands during previous weeks seem to have satisfied immediate requirements, and there is no tendency for speculative purchases. At the same time sellers showed a marked inclination to clear before new crop comes to the market, and in spite of comparatively small stocks prices have given way. The new crop, which so far promises well, is now beginning to be cut in Turkey, but supplies from this source are not likely to reach us before the end of September. In Holland values remain exceedingly firm, as the crop there is not yet in a sufficiently advanced stage to react on prices. Turkish seed quoted at 43*s.* to 45*s.*, Morocco 46*s.* to 54*s.*, Spanish 65*s.* to 70*s.* per 464 lbs. *Caraway* remains scarce on the spot, no stocks being available in this country, and abroad only very small parcels are left. The reports of the crop in the various countries, though contradictory, seem to show that the yield will not reach the earlier expectations, as the cold spring did irreparable harm. The quality, however, promises to be very fair should the present fine weather last a little longer. The Dutch crop is estimated to yield about double the usual quantity, and a few sales have been made

for autumn delivery at about 27s.; but as the demand will be very heavy in the beginning, speculators operate very carefully. 35s. is quoted for seed on the spot. *Croton*.—Of 57 packages offered in auction nothing was sold. Some seed of rather dull appearance is held at 30s. per cwt. *Cammin* has been very firm lately. 94 bags were catalogued for sale, of which a few very inferior quality were sold at 10s. per cwt. *Fennel* is in fair request. Present value about 20s. per cwt. *Fennugreek* sells very slowly, and lower prices will have to be accepted to induce exporters to supply their wants in this market. Of 7 cases *Musk* offered in drug sale—a quantity much below recent average—nothing was sold. *White mustard* is very firm at previous rates, viz. 5s. 6d. per bushel for new brown Bombay. A box of *Quince* seed bought in at 1s. 6d. per lb. nominally. Of English *Rapeseed* a few parcels of extra quality have been sold at from 50s. to 52s., while French seed was held at 47s. to 48s. per 424 lbs. ex warehouse. The new French crop is now being harvested and promises well, but prices have not been fixed yet.

SENNA.—There was a fair supply of *Tinercelly* leaves, including some of very fine quality, but the views of the owners are evidently too elevated to tempt purchasers; 8½d. per lb. was paid for bold, greenish, whole leaves, 4½d. for broken, blackish leaves, and 2d. for dark and common leaves.

SPICES.—*Cloves* are on the decline; in public sale on Wednesday 9¼d. to 9½d. per lb. was paid for ordinary dark to fair quality, and 9½d. for good Zanzibar, freshly imported. *Cassia lignea* has realised a slightly better price, viz., 24s. 6d. per cwt. for good quality. *Cochin Ginger* is again 3s. to 4s. cheaper for small cut, but the bolder varieties keep steady; *Jamaica* is cheap. Sales have been made at 38s. to 40s. for good ordinary, 45s. to 48s. for fair washed, and 94s. for a parcel of very fine, bold quality. *Mace* and *Nutmegs* continue to improve. *Pimento* firm at 2½d. per lb. for fair quality. The market in *Pepper* is dull, so far as white varieties are concerned, and the prices mentioned in our last report would scarcely be obtained now. Black pepper is still unchanged, but with limited business and weaker tendency. Good *Tellicherry* sold at 7½d. per lb.

SULPHATE OF QUININE.—In public sale on Thursday, 1,000 oz. *Brunswick* in bulk were sold at 2½d. per lb.; 1,000 oz. *Italian* in bulk at the same price; 400 1-oz. bottles of *Howards* brand at 2s. 9d.; and 3,000 oz. *Boehringer's* in bulk, just imported, at 2s. 1d. to 2s. 1½d. per oz. After the sale of the latter parcel the broker offered another 4,000 oz. of the same brand, and 800 oz. of *Zimmer's* make in bulk, but without finding a purchaser.

WAX (BEES').—225 packages were offered in sale on Thursday, a great proportion consisting of *Jamaica*, of which 44 packages, good pale orange, partly mixed with brown, or slightly drossy, were sold at 120s. to 127s. 6d. per cwt.

WAX (VEGETABLE).—Of Japan wax nothing was sold in auction. This article remains lifeless, very little business is doing, and 52s. 6d. per cwt. might buy good whitish squares for a quantity.

THE AMERICAN MARKETS.

NEW YORK, June 25.

THE drug-market continues to improve daily as to the amount of business passing, but prices cannot be said to keep pace with the improved prospects, mostly everything ruling in favour of buyers.

The prices sterling (in parentheses) are what the different articles would cost delivered in London, all market allowances, discounts, &c., being taken into account. Importers can, therefore, see at a glance the course of this market compared with their own.

CANELLA ALBA is in good demand from Germany and is very scarce; 8c. (4½d.) is demanded for any left.

SPERMACELE.—The market has been cleared by Hamburg buyers, who have taken all they could get, both spot and forward. The price is now 45c. (1s. 11d.), but is nominal, for there are no supplies.

QUININE.—The market is now apparently steady, but the

demand is light. The price rules from 50c. (2s. 2d.) to 52c. (2s. 2½d.) in bulk.

SENEGA ROOT is cheaper. Prime bright Western is quoted 44c. (2s. 1d.); inferior grades are unsaleable.

SERPENTARIA is very scarce; none to be had here, and in queries in Texas meet with no response.

OIL PEPPERMINT unchanged.

For the first time for two years a drug-auction took place here on Thursday; the goods offered for public competition being the entire stock of a wholesale house, who, having a slight fire on their premises some time ago, determined to sell out to the insurance companies and retire from business. The goods were in original packages, and in good condition, very little damage being done by fire or water. As a real test of the market at this side, the prices realised for some of the lots may interest your readers.

25 bales fair Fennugreek seeds	1½c. or with London terms	6d.
15 casks clean bold Sandarac ..	15½c.	75s.
19 bales Jalap	9c.	4½d.
22 cases Balsam Tolu in small tins	23½c.	1s. 1½d.
12 „ bright blocky Gamboge	45c.	11½ 5s!
5 „ genuine Balsam Peru ..	87c.	3s. 11d.
10,000 „ Brunswick Cloch. Sulph.	4½c.	2½d.
5 „ Gum Mastic, pale drop	63c.	3s.
17 bales ordinary Ipecac, damaged	51c.	2s. 3d.
26 cases Gum Asafoetida ..	6c.	30s.
29 „ Gum Myrrh, bright sorts	21c.	100s.
8 bales fair green Tiny Senna ..	10c.	5½d.

Other prices were in proportion.

CABLEGRAM.

NEW YORK, July 8.

Domestic makers have advanced their prices to 58c. for bulk (100 oz. tins). This is about equivalent to 2s. 5d. less 5 per cent. in London. The general opinion is that the market will now remain steady.

Jalap, good heavy dark V.C. No arrivals have taken place nor have we any advices of any on the way. Considerable speculation in this article has consequently taken place, and prices are notably higher. It is difficult at present to fix the position of this drug.

Sarsaparilla, Mexican, V.C. We have had arrivals of 150 serons during the past week. This stock, it is understood, is not to be sold at current rates (say 7½c. = 4½d.), as these do not pay consigners. If not sold the shipment is to be stored.

MARRIAGES.

STEPHEN — RETTIE.—At Waverley Hotel, Princes' Street, Edinburgh, on June 29, by the Rev. Robert G. Forrest, minister of West Coates parish, John W. Stephen, chemist, &c., Macduff, to Maggie McEachran, only daughter of the late Peter Rettie, Macduff, N.B.

WAKEFIELD—EDWARDS.—On June 24, at St. Mary's, Birmingham (by the Rev. H. F. Pegg, vicar, assisted by the Rev. J. Cook Oakham), John, only son of John Wakefield, The Poplars, Knowle, and of the firm of Bellamy & Wakefield, chemists, 1 Easy Row, to Sarah Mary (Jannie), eldest daughter of the late John Roberts Edwards, of Snow Hill.

A REASONABLE DISCOUNT FOR CASH.—A well-known surgeon a few days ago performed an operation on a little boy. The operation was comparatively trifling. The mother and the father and the little boy were in the surgeon's house just a quarter of an hour. "What is your fee?" said the father. "A hundred guineas," was the reply. The father was startled, and said he had not a hundred guineas. "Oh! then I will take fifty guineas." "But I cannot afford it," said the father; "and had you told me what your charge would be, I would not have come." "Then I will take twenty-five guineas." After a little more delay the surgeon took ten guineas on account. Clever man that. His principle is to demand all, and take what he can get. He is at all events an adept at trying it on.—*Echo*.



Memoranda for Correspondents.

Always send your proper name and address: we do not publish them unless you wish.

Write on one side of the paper only; write early; and devote a separate sheet of paper to each query if you ask more than one, or if you are writing about other matters at the same time.

If you send us newspapers please mark what you wish us to read.

Ask us anything of pharmaceutical interest: we shall do our best to reply.

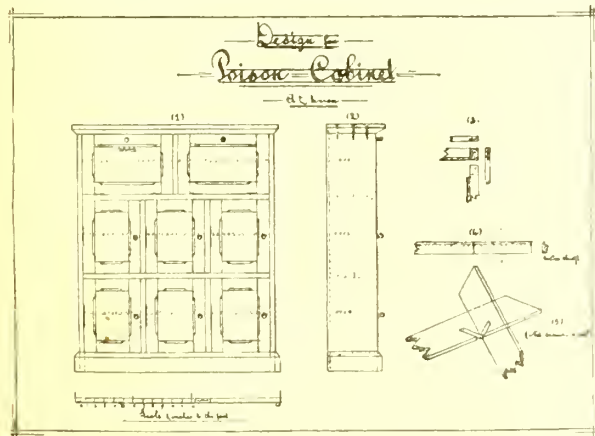
Poison Cabinet.

SIR,—The design for this cabinet is founded on one described by Mr. Biroth at a meeting of the American Pharmaceutical Association, and figured in this journal some time ago. [1884, page 508.]

The primary object aimed at is to isolate the principal poisons from the general stock and also from each other; the arrangements to be described not only fulfil this, but will also be found to greatly facilitate rapidity and accuracy in dispensing, to which might be added cleanliness and better preservation from light and air. For instance, instead of, as in the old style, having to grope about in some dark, musty top shelf among bottles of all sizes and degrees of dust for the article required, the dispenser has simply to turn to the cabinet and is at once guided to the right compartment by the generic label which is placed on each.

I believe the cabinet form is best, as, being easily portable, it can be shifted about to any desired place in the pharmacy or, if necessary, removed altogether. It is wonderfully compact, taking up very little space, the extreme measurements over all being, height 25 inches, breadth 21 inches, depth 6 inches.

Its construction, as may be seen from the drawing, is simple and well suited for amateur work; the whole case is made of half-inch yellow pine, except the top, which is a solid piece one inch thick (bevelled to half inch where it overhangs as shown), the backing is quarter inch stuff, and the door panels are made from cigar-box lids.



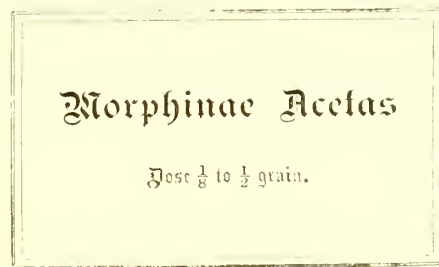
Figs. 1 and 2 show front and side views of the finished case. It will be observed that the lower doors open sideways, the upper ones downwards; the dotted lines crossing the compartments indicate the position of the small half shelves, which, along with the requisite stops for the doors, are glued in when the case is finished; fig. 3 shows the method of halving the door-frames together at each corner; fig. 4 shows how the pieces necessary to construct the frames can be made in quantity from a single slip of wood, the

dotted line indicating where the rebate to receive the panel is cut; fig. 5 shows how the principal partitions are halved together. The small doors are hung on a single hinge to save trouble, and the finishing touches are put by staining in two shades with Stephens's mahogany stain and plainly varnishing, which, with the addition of small ebony shutter knobs for the doors, gives quite an artistic appearance.

It is easy to enlarge the design, if required, by adding another row of compartments in either direction, such alteration being of course guided by individual requirements; but I believe that if the cabinet is made too comprehensive its utility as a safeguard is somewhat impaired. In my own arrangement, such tinctures as opium, nux vomica, digitalis, &c. (often required in quantities), are kept on the top shelf of a recess glass case, within easy reach of the dispenser as he stands before the cabinet, the flat top of which might, however, be utilised for some of these if desired.

The internal fittings will more or less be governed by certain substances and solutions being more in request than others. Each of the six lower compartments admits of the following bottles, two 8-oz. rounds in front, three 2-oz. wide mouth behind these, on the same level, and three 1-oz. wide mouth on the half shelf. The series of labels we use for these are as follows:—Morphia, arsenic, cyanides, opium, mercury, strychnine; the top compartments contain in the one alkaloids and their solutions, and in the other chloral, chloroform, &c. Whatever arrangement is adopted, care should be taken to have the bottles in any one compartment differing from each other in as many particulars as possible; for instance, our mercurial division is arranged as follows: in front an 8-oz. compressed-stopper round of liq. hyd. perch., a 1-oz. globe-stoppered bottle of Donovan's solution, and a 2-oz. flat-stoppered bottle of solution of hydrarg. perchlor., one grain in the drachm (a most useful solution); the three bottles also differ essentially in labels. Behind these are differently coloured bottles containing the red and green iodides and calomel, and on the half shelf a bottle of calomel trituration (1 in 4). I may add that the only other trituration which we have occasion to use is morphine hydrochlorate, and that not often.

The small powder bottles being placed at the back affords an additional precaution by being a little difficult of access; they should be rendered distinctive by different coloured glass or paper, and clearly labelled. Subjoined is a specimen of the engrossing which we use for this purpose; it is done with a J nib, and with a little practice the chemist can print his own labels.



When *in situ*, the labels should be well sized and varnished, a useful varnish for the purpose being equal parts of Canada balsam and oil of turpentine mixed and allowed to clear. This system of labelling has the advantage over the ordinary, or even the recess, kind, that the strength and dose can be inscribed, which is often very useful, and if neatly done they are very legible.

The cabinet cost me, when finished, something under 10s. for materials, plus the labour and time expended on its construction; but in any case the price ought not to greatly exceed say 25s., and from experience I am sure that the safety and comfort gained by its use well repays the outlay.

Bray, Ireland, June 20.

A. L. DORAN.

Curious Breakages.

176/5. Mr. W. Hindle (Gorleston) tells us of the bursting of two bottles of Lamplough's Saline he remembers during his apprenticeship seventeen or eighteen years ago. He concluded it was a defect in that particular batch, as it has never occurred since in his experience.

9,176. *Phanix* tells us about a Winchester holding about 10 lbs. of sulphuric acid, which stood on the top shelf in a warehouse. It had only been in a few days and was in the same condition as received, the stopper being corked down. One very hot day it suddenly burst and the acid was soon running about in all directions. An assistant who stood near the spot had a new pair of trousers completely spoilt, and other damage was done.

SIR,—We have read with considerable interest the correspondence which has appeared in your journal re saline explosions, having had one bottle of Lamplough's explode, which Mr. Lamplough willingly replaced. A saline we ourselves prepared from a formula given in "*Beasley*," p. 188, viz., ac. tart. 45·7, soda carb. 52·4, potas. chlor. 1·9, so frequently exploded that we wrote to the editor of another journal asking if he or his readers could explain. The letter, however, did not appear, and it was stated that the matter was involved in obscurity; they were, however, making inquiries, and would report should any explanation be discovered. We never heard anything more from them on the subject. We thought the chlorate might give rise to some gaseous compound, so reduced the quantity, and added some sugar, which we hoped would act as a buffer, and mechanically keep the acid and soda somewhat apart. For a long time the alteration seemed effective, but occasional explosions have taken place. This afternoon my assistant was labelling some prepared last Thursday (and put on one side until to-day on trial, a plan we have adopted for some time), when three bottles exploded at the same moment. I take the liberty of sending herewith part of a bottle for your inspection. We dry the ingredients separately in a tin drying-chest, made specially, on separate shelves, heated at bottom by gas jets. The bottles are carefully dried on a kitchen range, with stoppers removed. Further, last batch was made on a hot dry day, so that Mr. Lamplough's "frost and wet" suggestion does not apply in this case. The formula now adopted is: ac. tart. 2 lb. 13 oz., soda carb. 3 lb. 4 oz. 66 gr., sacch. alb. 1½ lb., potas. chlor. 1 oz.

Yours truly,

OXFORD. (176/48)

We have called Dr. Dupré's attention to this correspondence, and he writes:—

Some of the so-called breakages are no doubt mere breakages due to badly annealed glass, others may be due to the action of damp.

As regards the proposed explanation, viz., the production of peroxide of chlorine, I am not at all prepared to give an opinion. I will, however, take an early opportunity of looking into the matter, and will let you know the result.

I am, yours faithfully,

Laboratory, A. DUPRÉ.
Westminster Hospital Medical School, July 7.

The Hop Bitters Title.

SIR,—I have read with much surprise the letter of Mr. Lea, of Folkestone, and can only say how much better spirit would have been manifested had Mr. Lea sent you a sovereign towards the general fund and have been thankful the "cap did not fit." I promise you I will not withdraw my subscription as long as you continue to bring forward matters of trade interest in such straightforward, manly language. I do love plain speaking.

Yours faithfully,

Langport, July 3. H. A. CHANT.

SIR,—Pray allow me to thank you on behalf of a few of my pharmaceutical friends for publishing such an amusing epistle as the one emanating from Folkestone, which appears in the Correspondence column of Saturday's CHEMIST AND DRUGGIST. We very rarely meet with such a laughter-provoking specimen of correspondence outside the columns of *Tit Bits*, and trust that when Mr. F. J. L. carries out his alarming threats they will not ruin your prospects entirely; but if you should be obliged to close the columns of your instructive journal (and here we sigh), allow us to suggest that you start a "Comic" for a change; we should think that Mr. F. J. L., as leading contributor, could amuse us for a long, long period with his forked-lightning, heavy-tragedian style. And in conclusion, Mr. Editor, we have decided that

we will not go to Folkestone for our summer holiday; we are persuaded that it must be a hot-bed of sluggish livers, if we may judge from the grateful disposition of your "Bitter" correspondent for your sound, common-sense advice; and should suppose that a man with such a flow of threats at his command ought to possess the amount of brain-power necessary to invent a more original name, and certainly one less deceiving to the British public, than

Exeter, July 4.

HOP TONIC BITTERS. (8/176.)

SIR,—I have not much time to spare, but I cannot allow the letter of Frederick James Lea to pass unnoticed. I have your comment on his label before me, and thoroughly agree with every line of it. If Mr. Lea's object is not what you state it to be, viz., representing that his Hop Bitters are equal to the original, at less money, then perhaps he or his numerous connections will tell us what his object was, and why he did not call his preparation "Gentian Tonic Bitters," or any other name. It is quite evident you "struck a sore spot," Mr. Editor; but such honest, straightforward criticism will make you many friends for the one who retires abashed. The gross insinuation of Mr. Lea relating to your being a champion of the Hop Bitters Company, &c., is, like his whole letter, "utter bosh," which would have been far better (for Mr. Lea) unwritten. I fully expect to see THE CHEMIST AND DRUGGIST for next week very lean; what with half the ads and the support of the Messrs. Lea gone, it will be hardly worth subscribing for. But *nil desperandum!* I have got value for my subscriptions long ago, and you will not be the sufferer, but Mr. Lea himself. Speak out, tell us what you think, and we will like you all the better; we are not all from Folkestone.

Yours,

GRATITUDE. (177/42)

A Pharmaceutical Fungus.

SIR,—Just out of curiosity I send you the enclosed for your opinion. It was found inside a large carboy. The colour was made with cochineal and ammonia. It was not filtered water but from a pump of spring water, and being a most curious growth I send it for your inspection. Perhaps you will let me know your opinion in next Saturday's CHEMIST AND DRUGGIST, and oblige,

Yours truly,

W. L. (176/39.)

[The specimen which W. L. sends us is a leather-like and brittle sheet, of circular form, 6 inches in diameter. What we take to be the lower surface resembles kid-leather in appearance, and the upper surface is almost uniformly red-brown in colour, with numerous black spots a little larger than cochineal, and suggestive of the remains of the grains. We presume that the specimen is all that is left of a covering of ordinary mould (*Penicillium glaucum*) which was formed on the top of the liquid cochineal, and has ultimately been submerged and dried. These superficial growths are very common.]

Elixir Proprietatis.

SIR,—In an old work before me (in manuscript) I find the following:—

Elixir Proprietatis.

Aloes..	..	..	..	..	..	3j.
Myrrh	..	..	..	..	..	3j.
Saffron	..	..	..	..	..	3j.
Sal ammoniac	..	..	..	..	..	5vj.
Salt of tartar	..	..	..	..	..	3viij.
Mountain wine	..	..	..	..	..	Oij.

Mix.

Several old herb and drug shops around here have sold the above. On one occasion I tasted a little of some that had been evaporated to about one quarter the bulk by exposure in a shop window, and could recognise the taste of the salts. One wholesale maker some time ago told me that he used orange wine for mountain wine in the manufacture of the elixir. I have no doubt but that the salt of tartar is used in variable quantities, some mixtures containing much less than ½ lb. to the quart.

Hurst, July 1.

GEORGE WALKER.

[Is 8 drachms of salt of tartar not intended?]

Butter Colouring.

SIR,—A plan which would, in my opinion, yield a purer resin of annatto for the manufacture of a butter colour than can be obtained by that given in your last issue in answer to correspondents, would be to macerate whole annatto in strong spirit for some time and subsequently to boil it in the same spirit, using a second quantity if the extraction were incomplete. Methylated spirit, which could be recovered by distillation, would do, and it would be readily known when all the resin was dissolved by the non-production of a beautiful blue colour when a drop or two of the alcoholic solution was added to a small quantity of strong sulphuric acid. The test answers best when performed in this way; not so clearly when the order of mixing is reversed. The residue from the distillation of the spirit would then be dissolved in alkaline carbonate solution, preferably sodium carbonate, and precipitated by diluted sulphuric acid, which appears to answer best. Procured in this way the resin is easily and quickly washed, and when dried is ready for treatment with oil, which I think is a very decided improvement—at least upon potassic carbonate solutions—for the following reasons:—One essential requisite in a butter colour is that it colour the butter only, while leaving the milk free. This annatto, or rather its red resin, does, by reason of its solubility in oils—including butter-fat—and its insolubility in aqueous, acid, and other fluids, and it seems reasonable to conclude that it will the better answer the purpose if previously held in solution in oil. I know one commercial butter colour—a paste containing some oil—which is very highly approved by dairymen who use it. This may be partly due to the comparatively large amount of real annatto resin in it—17 per cent., a large excess over what usually exists in the rolls—but it is no doubt also partly due to the oil it contains. The objection I have to the alkaline method of procuring the resin is that much more than the resin is extracted and subsequently precipitated by the acid. This involves a washing which is very tedious and, besides, never entirely satisfactory, owing to the presence of extractive matter on the filter, which is not easily removed by this means, and which might probably affect its efficiency as a butter colour. By the spirit method the product is a much purer, though by no means pure, resin, so that the treatment with alkaline carbonate and acid must not be omitted if the best results be desired.

Bellshill.

W. LAWSON.

9/176. **Whitworth's Drops or Red Bottle.**—*Phoenix* kindly gives us the following information. The preparation, he says, is also called Whitworth's Red Rub, and is composed as follows:—

Rectified spirits wine	2 oz.
Comp. tinct. lavender	1 "
Oil origanum	2 drachms

Odourless Paraffin Oil.

SIR,—Could you or one of your correspondents inform me where I could procure odourless paraffin oil? A lady customer has been recommended to try it for preventing loss of hair. I have seen a specimen perfectly colourless and scentless, but have not been able to trace its origin.

Weymouth.

THOMAS B. GROVES.

[Perhaps Messrs. A. B. Fleming & Co., Ltd., Caroline Park, Edinburgh, whose advertisement is to be found in the last CHEMIST AND DRUGGIST DIARY, can supply this article.]

A subscriber in Buenos Ayres writes:—"The trade report of your Journal is of the utmost utility to foreigners, and allow me to add that you deserve high praise for giving a weekly issue without increasing the subscription."

176/74. *Cymro*.—**Linimentum Roseni** (Lin. de Rosen):—

Olei myristicæ expres. . . .	5 parts
" caryophylli. . . .	5 "
Spirit juniperi	50 "

Mix the oils together, and add the spirit so as to produce a milky mixture.

176/73. *S. L.*—**Sulphur Caballum** is a synonym for sulphur vivum.

Chlorate of Potash.—The solubility of this salt is somewhere between 1 in 16.5 and 17 of distilled water at 15° C. The difference for spring water will be very slightly less. It is safe to take 1 in 18 as the figures for use at the dispensing counter.

177/23. *D. S. Anderson*.—**Syrupus Calcii Chloridi** is made by dissolving 80 grains of chloride of calcium in 1 oz. of simple syrup.

Syrupus Ferri Protochloridi.

Iron wire (cleaned and cut small) ..	70 grs.
Hydrochloric acid (B.P.)	288 "
Water	1½ oz.

Put the ingredients in a small flask and heat gently until effervescence ceases; then boil for a few minutes, and filter while hot into sufficient thick simple syrup to make 10 oz. Each fluid drachm contains 2 grains of FeCl₂.

[By Mr. W. Gilmour in THE CHEMIST AND DRUGGIST, 1881, p. 251.]

This correspondent also wishes a formula for *Liq. euonymini et pepsin*.

11/172. *Nero* asks for the safest and most effectual mode of destroying a number of crows. They are doing great damage to a crop of barley. The remedy must, if possible, be given in vicinity of the crop.

[There are so many legal objections to chemical remedies in this case that we can only advise our correspondent to adopt the simple plan of hiring a crow-tender at 6*d.* per day. The *wrong* birds always get hold of poison, and crows are about as cunning as any living animals. Barley saturated with strychnine or arsenic is the only likely thing to tempt them in the summer time, when their palates are gratified with every variety of food; but then it is illegal to prepare any such compounds.]

9/176. **Maggots in Sheep.** *Phoenix* sends us the following:—In Lincolnshire the common remedy for maggots in sheep is—Dissolve in 2 gallons of buttermilk or water (the former generally preferred) 1 oz. hyd. perchlor. and add 1 pint turps, to be applied by means of a quill in a corked bottle.

177/30. *Suburban*.—**Starch Gloss.**—Borax and gum acacia are generally used. Please send us a few drachms of the kind you mention.

Shampoo Liquid:—

Sapo mollis (B.P.)	1 oz.
Liquor potassæ	2 "
Rectified spirit	2 "
Perfume	q.s.
Water to	20 oz.

Dissolve the soap in the water by aid of heat, add the potash, and when cold, the spirit and perfume.

177/33. *J. R. H.*—**Yellow Wood-stain.** An alcoholic solution of gamboge.

Aromatic Vinegar.—I made some acid, acetic, aromat. from the formula in Gray's Supplement, but find the oils separate. I used Beaufoy's acid; perhaps I should have used a stronger.—NOTTS. (174/62.)

[Glacial acetic acid should be used for aromatic vinegar, and a mixture of ordinary acetic acid and rectified spirit for toilet vinegar.]

(174/35.) *J. H.*—**Lacquer.**—A good lacquer for general use is made by dissolving 2 oz. of seed lac in 20 oz. of methylated spirit. Gamboge, dragon's blood, annatto, and other colouring matters are used for imparting the shades of colours which may be desired.

(2/21.) *W. W.*—**Sheep Dip.**—The following is said to resemble the dip you mention:—

	Oz.
Arsenious acid	23
Sulphur	23
Soft soap	60
Umber	6
Boiling water	40

Mix the powders together and make into a paste with the soft soap and boiling water.

(176/21.) *Extract.*—**Herb Beer Extract.**—

	Oz.
Extract of liquorice	$\frac{1}{2}$
Gentian root]	$\frac{1}{2}$
Horchond.]	1
Hops	1
Ginger	2

Boil the first three ingredients in 20 oz. of water down to 15 oz., then add the other ingredients and infuse for two hours; steam and set aside until cold. Then add:—

Oil of wintergreen	℥15
Rectified spirit	3ij.
Glycerine	3ij.

Dissolve the oil in the spirit before adding to the cold infusion; 1 oz. of this for each 4 gallons of the beer.

Soap Plaster is used for bad sores.

(175/37.) *Viridis.*—**Easton's Syrup** becomes dark on account of the oxidation of the ferrous phosphate into the ferric state, and, no doubt, during the process some of the organic constituents are also changed. It was pointed out some time ago by Mr. Grierson that many so-called pure cane sugars contain a large proportion of grape sugar, and he traced the coloration of some syrups to that source.

Wood Charcoal will not decolorise anything. It is animal charcoal that is used, but it has no effect in this case. All that you can do is to prevent it by storing in small and full bottles.

Mildew is removed by chlorinated lime solution.

Information Wanted.

Details of **Sullivan's Chromic Acid Process.** By R. K. (175/71.)

Transparent Mirror.—Process for, or makers (supposed to be French) of mirrored glass, which, while acting as a perfect mirror, is transparent. By A. Davies. (176/50.)

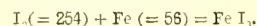
DISPENSING NOTES.

190/42.—*Nostrebor.*—**Unsightly Mixture.**—Strong solutions of liquorice extract are very readily decomposed by alkaloidal solutions, with separation of *glycyrrhizin*, the saccharine principle of liquorice. There are several inorganic salts which precipitate the *glycyrrhizin*, potassium acid tartrate being one of them. The ammonium chloride and liquorice extract contained in the prescription under notice are added for the purpose of disguising the taste of the quinine. It was pointed out in *THE CHEMIST AND DRUGGIST* (vol. 28, p. 269) that sal ammoniac and liquorice disguise the taste of quinine; but in this case the combination should be in the form of powders. This should be pointed out to the prescriber if possible.

171/37. *W. L.* says:—"In reference to the mixture which 'Nemo,' in your issue of the 12th, calls attention to, I find if made with distilled water the mixture remains unchanged with the exception of a *slight* deposit, but if made with water containing lime it darkens and a much greater deposit takes place, which on being shaken has a rosy appearance. It is well, I think, that the *Pharmacopœia* now directs distilled water to be used in all cases for dispensing."

170/67. *Subscriber* writes:—"A batch of **Syr. Ferri Iodid.** has been made by mistake with equal weights of iodine and iron. How will this differ chemically from the correct quantities, and can it be remedied?"

[There will be no difference, as the iodine takes up a constant proportion of iron: for example:—



That is about 1 part of iron for 4 of iodine. Reference to the *Pharmacopœia* will show that there is a large excess of iron directed to be used. This is in order to keep the solution stable until it is mixed with the sugar, and a larger proportion has merely the same effect.]

171/68. *Pearl Coat.*—**Coating Pills.**—There is no royal road to this art. Some hit success very quickly, others plod away for months before they are satisfied with their results; and, strange to say, a process which is successful with one man may give wretched results with another, so you may have to cut out a path for yourself. The requisites are: thoroughly dry pills, a thin mucilage composed of 3ij. of acacia mucilage and 3iv. of water, an evaporating-dish, and two globular-shaped tin boxes, or, failing them, covered pots. The French chalk used should be the finest powdered. The pills are to be moistened with the mucilage in the dish; this must not be overdone, otherwise the pearl coating will be too thick; then, without delay, transfer them to one of the boxes containing plenty of French chalk, and rotate rapidly. Next, transfer to and rotate in the second box without chalk, in order to impart a polish.

173/73. **A Big Prescription.**—*A Country Chemist* asks what would be a fair price to charge for the following prescription which he has had to dispense. Perhaps some readers will give their opinion.

Phosphori pur.	$\frac{1}{8}$ gr.
Quinæ sulph.	$\frac{1}{8}$ gr.
Ferri redact.	ij.

Ft. pil. tales xvij.
Sign.—Capiat j. mane nocteque.

Lactopeptine	3ij.
Ferri et quin. cit.	3ij.
Sodæ hypophosph.	3j.
Calc. "	3j.
Potass. "	3j.
Liq. morph. hydroch.	3ss.
Vini ipecac.	3iij.
Tinct. scillæ	3iij.
" card. co.	3j.
Succ. taraxaci	3j.
Glycerini	3j.
Aq. menth., ad	3vj.

Ft. mist.
Sign.—3ss. sexta vel octa quaque horâ.

176/63. "Sanitas Oil and Benzoin."—*Mr. E. Worth*, of Bournemouth, writes:—"Having had occasion to dispense this many times, I thought I should like to confirm the clear directions you give. Your process is that which I always adopt in dispensing the prescription."

Indian Dispensing.

SIR.—Referring to Mr. Kidd's letter of June 5, in last issue, it does not necessarily follow that Lord Reay's "mixture" was dispensed at a Government dispensary, as instance the following. When I was an assistant in India some little time ago I had a prescription handed to me with the following remarks:—"I wish you could make it up properly; I have had it made up fully twenty times in India, and it has never been like that given me by the doctor who prescribed for me, nor has it ever been *twice* alike." On the prescription was the stamp of the firm in which Mr. Kidd is employed. I dispensed the medicine to the lady's satisfaction. Most of the compounding in India is done by natives, who "chuck" (no other word will do) the drugs into the bottles anyhow, in a mechanical way, as they have no knowledge of the drugs they are handling. The consequence is that a mixture in which any chemical action takes place, if dispensed at different chemists', is apt to have a totally different appearance each time.

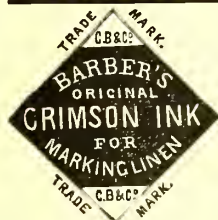
Yours faithfully,
London, July 4.
"SUCH BHAT." (1/6/16.)

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Great care is used in the preparation of our Oxide of Zinc, and it is superior to the ordinary Oxides sold as B.P., which frequently contain Arsenic and Sulphate of Zinc in sufficient quantities to prove irritating to the skin.

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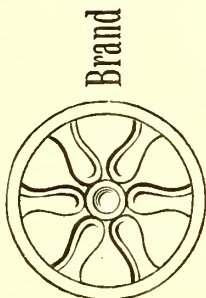
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EXTERNALLY: It has been used by *Bouchut* in *cutaneous carcinoma*, *Rossbach* for dissolving the false membranes of *Diphtheria* (see *Zeitsch. für Klin. Med.*, vi. II. 6), by *Jacoby* of New York for the same purpose, and recently Prof. Finkler himself has restored patency to an oesophagus occluded by *carcinoma* by the continuous administration of a solution.

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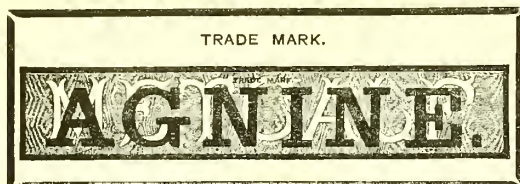
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which are prepared from selected Cinchona without the use of mineral acids, contain the whole alkaloidal contents of the bark, are uniform in quality, and carefully standardised. Each preparation contains 48 grains alkaloïds per fluid ounce—the former representing fine *Verde* Califaya, and the latter good Succirubra.

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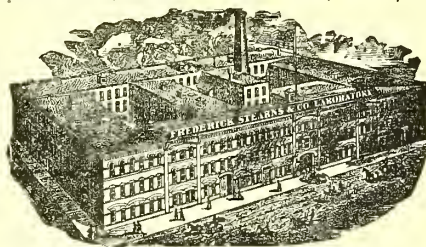
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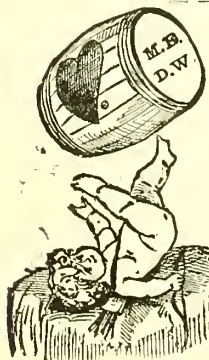
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s. d.					s. d.					
*Aconitine Crystals (Duquesnel's)	1-500 gr.	7	0	24	Hydrastine (White Alkaloid)	1-2 gr.	20	6	79	0
" " " " " " " " " " " "	1-200 gr.	7	0	24	Iodoform	1 gr.	9	0	32	0
Aloes Barb. B.P.	.5 gr.	5	0	16	" " and Iron		11	0	39	6
" Dilute (Hall's Dinuer)		5	0	16	*Ipecac. Powdered	1-4 gr.	5	0	16	0
" Socotrine, B.P.	.5 gr.	5	0	16	" " " " " " " " " " " "	.5 gr.	5	0	16	0
" and Asafoetida, B.P.	.5 gr.	5	0	16	" Comp. (Ipecac and Opium)	.5 gr.	9	0	32	0
" and Iron, B.P.	.5 gr.	5	0	16	" " and Squill, B.P.	.5 gr.	5	0	16	0
" and Myrrh, B.P.	.3 gr.	5	6	18	*Iron, Arseuiate	1-8 gr.	5	6	18	0
" " " " " " " " " " " "	.5 gr.	6	0	20	" Carbonate, B.P.	.5 gr.	5	6	18	0
" Nux Vomica		6	0	20	" by Hydrogen (Quevenne's)	1 gr.	5	0	16	0
*Alolin	1-10 gr.	5	0	16	" Iodide (Blaucard's Formula)	1 gr.	7	0	24	0
" " " " " " " " " " " "	1-4 gr.	6	0	20	" and Quinine Citrate	2 gr.	10	0	35	6
" " " " " " " " " " " "	1-2 gr.	7	0	24	" Quinine, and Strychuine		13	6	49	6
" Compound	1 gr.	11	0	39	Laxative Vegetable (Improved Cath.)		5	6	18	0
" " Strychnine		7	0	24	*Manganese, Bin-oxide	2 gr.	9	0	32	0
" " Strychnine and Belladonna		7	0	24	Mercury, Bin-Iodide	1-16 gr.	5	0	16	0
Anti-Cholera	2 gr.	7	0	24	" Proto-Iodide	1-8 gr.	5	0	16	0
*Anti-Dyspepsia (Fothergill's)		7	0	24	" " " " " " " " " " " "	1-4 gr.	7	0	24	0
*Aphrodisiac		16	0	59	Morphine, Muriate	1-8 gr.	7	0	24	0
Arsenious Acid	1-50 gr.	5	0	16	" " " " " " " " " " " "	1-4 gr.	9	0	32	0
" " " " " " " " " " " "	1-20 gr.	5	0	16	*Narcotic Extracts (Brown-Sequard)		15	0	55	6
*Asafoetida, U.S.		5	0	16	Nitro-Glycerin	1-100 gr.	7	0	24	0
" Compound, B.P.	.5 gr.	5	0	16	" " " " " " " " " " " "	1-50 gr.	7	0	24	0
*Atropine	1-300 gr.	7	0	24	Opium, Powdered	1 gr.	7	0	24	0
" " " " " " " " " " " "	1-100 gr.	7	0	24	" " and Acetate of Lead, B.P.	.5 gr.	7	0	24	0
Blue Mass, B.P.	1 gr.	5	0	16	" " and Camphor		7	0	24	0
" " " " " " " " " " " "	2 gr.	5	0	16	Pepsin, Pure Concentrated	1 gr.	9	0	32	0
" " " " " " " " " " " "	3 gr.	5	0	16	Phosphorus	1-100 gr.	6	0	20	0
" " " " " " " " " " " "	.5 gr.	5	6	18	" " " " " " " " " " " "	1-50 gr.	6	0	20	0
" Colocynth and Hyoscy.		9	0	32	" " " " " " " " " " " "	1-30 gr.	6	0	20	0
Calcium Sulphide	1-10 gr.	6	0	20	" and Iron		8	0	28	0
" " " " " " " " " " " "	1-4 gr.	6	0	20	" Iron and Quinine		17	0	63	6
" " " " " " " " " " " "	1-2 gr.	6	0	20	" and Nux Vomica		7	0	24	0
" " " " " " " " " " " "	1 gr.	6	0	20	" " Nux Vomica and Iron		8	0	28	0
Calomel, Colocynth, and Hyoscyanus		9	0	32	" and Quinine		17	0	63	6
" Comp. B.P.	.5 gr.	5	6	18	" Quinine, Iron, and Strychnine		17	0	63	6
" and Opium		7	6	26	" and Valer. Zinc		11	0	39	6
*Camphor and Hyoscyanus		5	6	18	Picrotoxin	1-80 gr.	7	0	24	0
" Mono-Bromated	2 gr.	11	0	39	*Podophyllin	1-8 gr.	5	0	16	0
*Cannabis Indica Extract	1-4 gr.	7	0	24	" " " " " " " " " " " "	1-4 gr.	5	0	16	0
" " " " " " " " " " " "	1-2 gr.	9	0	32	" " " " " " " " " " " "	1-2 gr.	5	6	18	0
*Cascara Sagrada Extract	3 gr.	7	0	24	Comp.		8	0	28	0
Cathartic Compound U.S.P.		5	6	18	Quinine, Bi-Sulphate	1-4 gr.	5	0	16	0
*Codeine	1-2 gr.	20	6	79	" " " " " " " " " " " "	1-2 gr.	5	6	18	0
Colocynth Comp. B.P.	4 gr.	8	0	28	" " " " " " " " " " " "	1 gr.	6	0	20	0
" " " " " " " " " " " "	.5 gr.	9	0	32	" " " " " " " " " " " "	2 gr.	9	0	32	0
" " " " " " " " " " " "	.5 gr.	9	0	32	" " " " " " " " " " " "	3 gr.	12	6	45	6
" " " " " " " " " " " "	.5 gr.	9	0	32	" " " " " " " " " " " "	4 gr.	16	6	61	6
" " " " " " " " " " " "	.5 gr.	9	0	32	" " " " " " " " " " " "	.5 gr.	20	6	75	0
" " " " " " " " " " " "	.5 gr.	9	0	32	Sulphate	1-4 gr.	5	6	18	0
" " " " " " " " " " " "	.5 gr.	9	0	32	" " " " " " " " " " " "	1-2 gr.	6	0	20	0
Conium Compound, B.P.	.5 gr.	5	0	16	" " " " " " " " " " " "	1 gr.	6	6	22	0
*Copaiba Compound		5	6	18	" " " " " " " " " " " "	2 gr.	10	0	36	0
" and Oleo-Resin Canbch	.5 gr.	11	0	39	" " " " " " " " " " " "	3 gr.	14	6	51	6
Corrosive Sublimate	1-30 gr.	5	0	16	" " " " " " " " " " " "	4 gr.	18	6	67	6
" " " " " " " " " " " "	1-20 gr.	5	0	16	" " " " " " " " " " " "	.5 gr.	22	0	83	0
" " " " " " " " " " " "	1-10 gr.	5	0	16	Comp. (Anti-malarial)		15	0	55	6
*Croton Chloral	1 gr.	10	0	36	Rhubarb Comp., B.P.	.5 gr.	7	0	24	0
" " " " " " " " " " " "	2 gr.	17	0	63	" " and Blue Mass	.5 gr.	7	0	24	0
*Cubeb, Oleo-Resin, with Soda		7	0	24	*Rhubarb, Ipecac. and Soda		7	0	24	0
Digitalin	1-60 gr.	7	0	24	Salicylic Acid	2 gr.	7	0	24	0
*Elaterine	1-20 gr.	13	0	47	" " " " " " " " " " " "	.5 gr.	11	0	39	6
Emmenagogue (Mutter's)		5	6	18	Comp.		16	6	63	0
Ergotin	3 gr.	16	6	63	Soap Comp., B.P.	.5 gr.	8	0	29	0
Euonymin	2 gr.	16	0	59	Squill Comp., B.P.	.5 gr.	5	6	18	0
" " " " " " " " " " " "	3 gr.	20	6	79	Strychnine	1-50 gr.	5	0	16	0
" Compound		16	0	59	Zinc. Phosphide	1-4 gr.	7	0	24	0
Ferruginous (Bland's)	3 gr.	6	0	20	" " " " " " " " " " " "	1-2 gr.	9	0	32	0
" " " " " " " " " " " "	.5 gr.	7	0	24	" Valerianate	1 gr.	8	6	30	0

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(LATE A. H. JACKSON & CO.),
MAKERS OF

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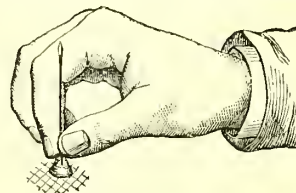
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THE
ASSOCIATION for the SUPPLY of PURE VACCINE LYMPH,
12 PAUL MALL EAST, LONDON, S.W.
SOLE AGENTS FOR DR. WARLDMONT'S CALF VACCINE

Tubes, 2s. each ; Half Tubes, 1s. each. Pomade in vials, 5s.
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EDWARD DARKE, Secretary.

Office hours, 10 to 4; Saturdays 10 to 2.

INDEX TO ADVERTISEMENTS.

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GOLD MEDALS—DUBLIN, 1882; BOSTON, 1883
LONDON (INTERNATIONAL EXHIBITION), 1884.

SIR JAMES MURRAY'S PURE FLUID MAGNESIA.

The ORIGINAL Article, as prepared by the Inventor, Sir James Murray, M.D.

For over 60 years in use as an excellent remedy in cases of

ACIDITY, INDIGESTION, HEARTBURN, GRAVEL, AND GOUT.

Sold by all respectable Chemists, in **LARGE-SIZED** Bottles (the 1s. size containing nearly *Double the quantity* usually sold at that price), at **1/**, **2/6**, and **3/6** each.

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Is a valuable remedy in cases of **SLEEPLESSNESS** and **WEAK NERVES**. Bottles, **1/** and **2/** each.

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I.H.E. 1884.



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IN AIRTIGHT WATERPROOF & ODOURLESS PACKAGES
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THE N. C. Cos. PACKAGES HAVE STOOD THE TEST FOR MANY YEARS, AND CAN
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ABSOLUTELY PURE.

A sweet, palatable Oil of such delicate flavour that it can be assimilated by the weakest digestion. Manufactured solely by
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N.B.—The fittings for above Screw Feeders are made in Glass (no Metal or Earthenware).

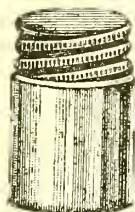
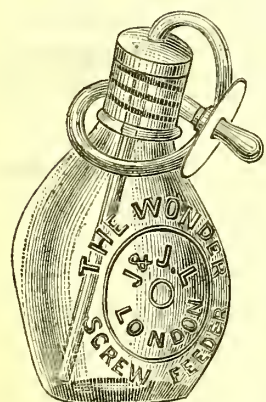
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Syphons,
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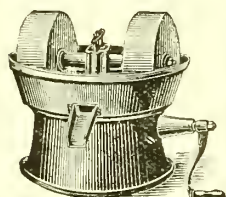
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A 1 in Style and "Get-up."

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MENTHOL CONES.

MENTHOL versus HOT WEATHER.

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LOZENGES, BOILED SUGARS, & JUJUBES TO ALL PARTS OF THE WORLD.

SEE PAGE ADVERTISEMENT, JANUARY 15, 1886, No. 110.

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MANUFACTURERS OF

Metallic Casks, Drums, & Kegs

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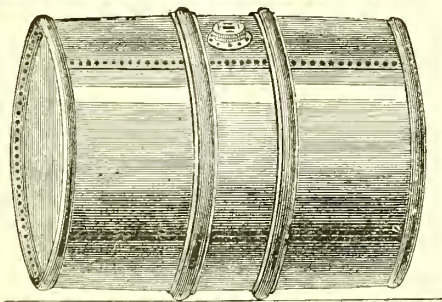
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CAPACITY 40 TO 120 GALLONS
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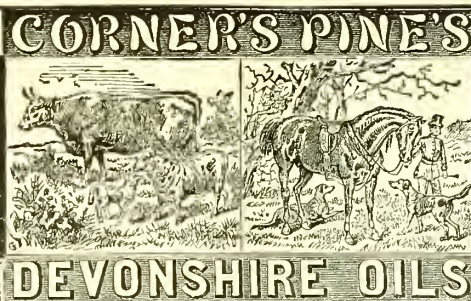
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THE SCOUR IN LAMBS CURED BY THE DEVONSHIRE COMPOUND.

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In Bottles, 2/-

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FOR CATTLE
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COWS-CALVES
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DOGS &c.
Both
for Outward
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Scalds, Burns,
Chilblains, Sprains,
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(WITH BEETROOT).



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DOG MEDICINES for the Cure of Distemper, Worms, Mange, Eczema, Ear Canker, Rheumatism, and the various other Canine Diseases. Full List and Pamphlet on Canine Diseases, post free.

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LOCURIUM. Price 6d. and 2s. per Bottle, retail. A Patent Vegetable Oil, curing Sore Feet in Dogs, Cracked Heels, Broken Knees, or Sore Backs in Horses; and Sores, Bites, and Wounds of all kinds either in man or beast

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OR YOUR WHOLESALE
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HORSES.—LIEUT. JAMES' BLISTER

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THIS CELEBRATED BLISTER IS NOW OFFERED TO THE TRADE AT THE FOLLOWING REDUCED PRICES:—
1 oz. pots from 14/- per doz. to 12/6 per doz. 1 lb. pots from £4 4 0 per doz. to £4 0 0
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TO DENTISTS AND CHEMISTS.—Every description of Artificial Teeth made at greatly reduced charges. Best work and best materials only.

An Upper or Lower Set, inclusive of Teeth Rubber, &c., £1 1s. Ditto, ditto, on Platina, £2 2s.

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Retail, 1/ 1/9, & 3/6; Wholesale, 7/ 12/ & 22/6 per doz. This much-admired Perfume (first introduced by the late Joseph Okell) may be obtained from the leading Patent Medicine Houses, Wholesale Druggists, and Druggists' Sundry Dealers.

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JAMES'S HERBAL OINTMENT, for the Cure of Pimples, Black Specks, Blotches, &c., and taking away Tan Freckles, Sunburn, &c. Sold by all Chemists, 1/1½ and 2/9 per box.

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For the instant removal of Superfluous Hair. Sold by all Chemists, 1/- and 2/- per box.

JAMES'S HERBAL POMADE,

For Promoting the Growth of the Hair, Whiskers, Beard, Moustachios, Eyebrows, and Eyelashes. Sold by all Chemists, 1/- and 2/- per box.

These Articles are well worthy the attention of Chemists, Wholesale Houses, and others, as they are being well advertised.

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In the house. Thirty-six Mice were found dead by using one packet of **SANFORD'S MICE POISON**. Mice eat it readily and found dead on the spot. Sold in packets at 3d., 6d., and 1s. each. **TRY SANFORD'S CELEBRATED RAT POISON** and see its wonderful effect. 210 rats were found dead by one dressing with it by Mr. Ramplly, Manor Farm, Boughton, Hunts.—130 rats were found dead in wheat stacks by Mr. Faine, Caxton. It is, without doubt, the best ever introduced. Price, 6d., 1s., and 2s., of SANFORD & SON, Sandy, Bedfordshire.

London Agents—Barclay, Edwards, Sanger, Sutton, and others.

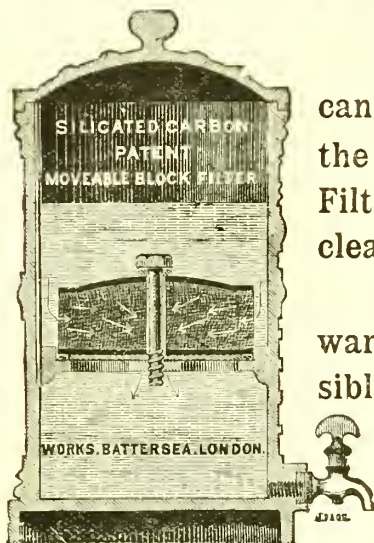
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SILICATED CARBON

PATENT MOVABLE BLOCK FILTERS.

LIBERAL DISCOUNT TO THE TRADE.



(Section.)

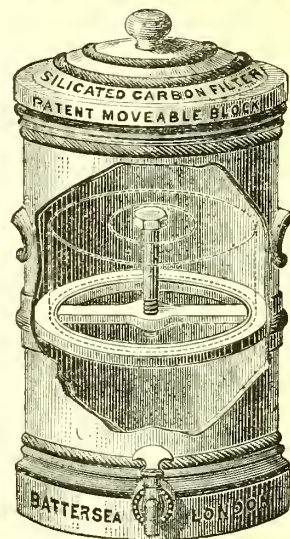
Domestic Filters (as above), in Cream-coloured Stoneware, with Plated Taps and Patent Movable Blocks:—

No. 27.	O. 1 gal. 10 6 each.	D. 6 gals. 42/- each.
A. 1	„ 14/6 „	E. 8 „ 52/- „
B. 2	„ 21/- „	F. 12 „ 70/- „
C. 4	„ 32/- „	

The Silicated Carbon Block can be instantly removed, leaving the whole of the interior of the Filter OPEN for inspection and cleansing.

The working parts are stoneware, and no corrosion is possible.

No loose Pan or inner vessel to cause breakage.



(Elevation with Block removed.)

Dining Room Filters, in Marbled China, with Plated Taps and Patent Movable Blocks:—

No. 22.	A. 2 gals. 35/- each
B. 5	„ 80/- „

Refrigerative Terra Cotta, do. do.:—

No. 25.	2 gals. 31/6 „
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In ordering please state "with patent movable block."

MAIN SUPPLY FILTER, NO. 40,

WITH PATENT MOVEABLE BLOCKS,

FOR

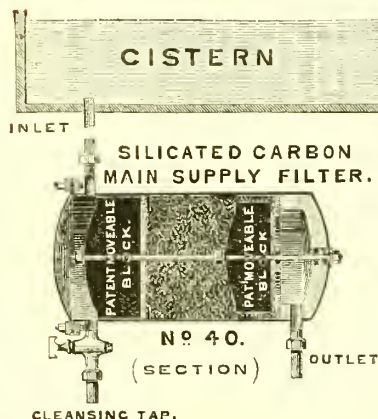
MINERAL WATER MANUFACTORIES,

As used by Messrs. Schwebbe, London, Liverpool, Glasgow, &c.; and most of the large makers.

Also for Schools, Hospitals, Mansions, &c.

PRICES.

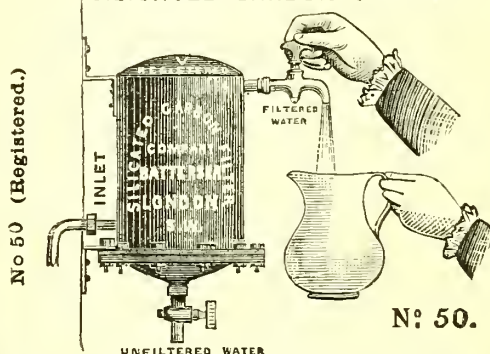
For 3-in. Pipes	£8 6s.
„ 1-in. Pipes	£9 9s.



CONSTANT SUPPLY FILTER,

WITH PATENT MOVEABLE BLOCK.

SILICATED CARBON [TRADE MARK]



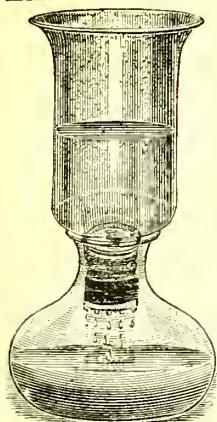
Complete, Price £3 8s each.

These Filters require no attention from servants, as they are always filled and ready for use. The act of drawing Unfiltered Water cleanses the Filter, by washing away the impurities collected on the carbon. [1]

FOR FULL ILLUSTRATED LISTS WRITE TO THE

SILICATED CARBON FILTER COMPANY,

CHURCH ROAD, BATTERSEA, LONDON, S.W.



STYLE "W."

CHEAPEST AND BEST.

THE ONLY RELIABLE
FILTERS.

MADE AT OUR OWN
GLASS WORKS.

No Intermediate Profits.

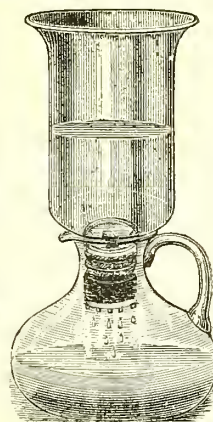
STYLE "W."—Plain: 1 pint, 2/3;
2 pints, 3/; 3 pints, 4/. Engraved:
1 pint, 2/9; 2 pints, 4/; 3 pints, 5/.

STYLE "X."—Plain: 1 pint, 3/;
2 pints, 4/; 3 pints, 5/. Engraved:
1 pint, 3/6; 2 pints, 5/; 3 pints, 6/.

VERY LIBERAL DISCOUNT
TO THE TRADE.

JUDSON'S GLASS WORKS,
ORMSIDE STREET,
Old Kent Road, LONDON.

D. JUDSON & SON
(LIM.),
SOUTHWARK STREET,
LONDON.



STYLE "X."

DOULTON & CO., LAMBETH, LONDON, S.E.

MANUFACTURERS OF EVERY DESCRIPTION OF

WATER FILTERS.

NEW PATENT

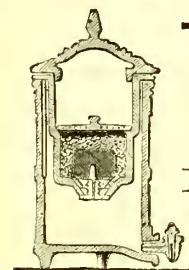
Manganous Carbon FILTERS.
Boudoir and Table FILTERS.
Pocket and Syphon FILTERS.

House Supply or Cistern FILTERS.
Patent Granular Charcoal FILTERS.
Refrigerator FILTERS.

MAIN SERVICE FILTERS

FOR INTERMITTENT OR CONSTANT SUPPLY.

See Reports, Analyses, &c. Detailed Lists on application.
To be obtained of all Dealers.



DOULTON & CO., LAMBETH, LONDON, S.E.

DEPOTS:—100 Soho Street, LIVERPOOL; Granville Wharf, BIRMINGHAM; and 6 Rue de Paradis, PARIS.

PHOTOGRAPHY.

ALL CHEMICALS USED IN PHOTOGRAPHY,

DRY PLATES, NEGATIVE VARNISHES, COLLODION, APPARATUS, LENSES,
ALBUMENISED AND SENSITISED PAPERS,

CAN BE PURCHASED AT WHOLESALE RATES IN THE SMALLEST QUANTITIES FROM

R. W. THOMAS & CO., 10 PALL MALL, LONDON, S.W.

Who are prepared to give instruction in the art of Photography FREE OF CHARGE, and every information to Chemists
who propose to lay themselves open to do a trade in Photographic Requisites with Amateurs, Professionals, &c.

PRICE LISTS POST FREE.

Complete Sets of Apparatus from £2 2s. to 30 Guineas.

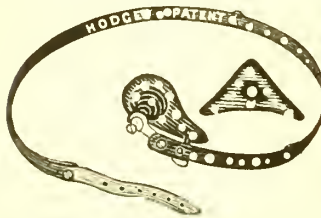
HOP BITTERS CAUTION.

Our Preparation being duly Registered and Trade Marked under the Laws of Great Britain, and having been placed before the Public at great expense to us, we give notice that we shall fully protect our rights in every instance. Anyone making use of our Title, Labels, Bottles, or in any way attempting to trade on our reputation will be dealt with at once to the fullest extent of the law.

HOP BITTERS CO., London.

Hunyadi János

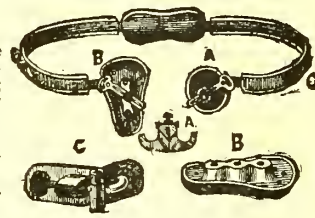
CAUTION.—Circumstances which have come to the knowledge of Andreas Saxlehner, Buda Pest, Sole Proprietor of the Hunyadi János Spring, compel him to WARN the British Public against SPURIOUS IMITATIONS. To secure genuineness, purchasers should see that every bottle has on the LABEL the name of "THE APOLLINARIS COMPANY (LIMITED), London."



HODGE'S IMPROVED TRUSS.

The Lancet, in recommending Hodge's Truss, on Oct. 3, says:—"The pad gives an elastic pressure—a very great advantage—enabling it to be worn with great comfort. The truss is light, though strong; possesses such advantages that it is comfortable, adapts itself readily to the movements of the body, and is very effective."
British Medical Journal says (Dec. 19):—"Hodge's Trusses have met with the high approval of surgeons who have had great experience in the treatment of rupture."

HODGE & CO., 327 OXFORD STREET, W.
FACTORY: 18 JAMES STREET, W.



IMPORTANT NOTICE.

FIRMS wishing to bring a Circular or Price List before the principal English-speaking Druggists throughout the world, should at once communicate with the **PUBLISHER** of **THE CHEMIST AND DRUGGIST**, 42 Cannon Street, London, E.C.

Such Circulars can be distributed through THE CHEMIST AND DRUGGIST at a cost of less than one-third of postage alone.

Introduced 1855.]

ROBINSON'S CONCENTRATED WATERS.

[Introduced 1855.]

One Ounce of these Waters added to Forty Ounces of Distilled Water forms a clear Medicated Water (without filtering), similar in every respect to those prepared according to the directions of the British Pharmacopœia, and free from all Chemical impurity. They will keep good any length of time in any climate.

Aqua Anethi, Concent., 4/ lb.	Aqua Cinnam. Ver. Concent., 6/ lb.	Aqua Fœniculi, Concent., 4/ lb.	Aqua Pimentæ, Concent., 4/ lb.
" Anisi " 4/ "	" Cassiæ " 4/ "	" Menth. Pip. " 4/ "	" Rose " 8/6 "
" Camphoræ " 4/ "	" Flor. Aurant. " 8/6 "	" Ang. " 6/ "	" Rose Virgin " 10/6 "
" Carui " 4/ "	" Flor. Sambuci " 8/6 "	" Virid. " 4/ "	

The above are put up in Bottles of 1/2 lb. or 1 lb. and upwards, each of which has the Inventor's Protection Label over Cork.
From the LANCET, July 15, 1883:—"CONCENTRATED WATERS (Robinson's, Pendleton, Manchester).—Among the samples sent to us we find Aq. Anethi, Anisi, Cinnam. Ver., Rose, and some dozen of others. Diluted with forty parts of water they form the ordinary waters of the Pharmacopœia. They are excellent in quality, and will be very useful, especially in country practice."

Wholesale Agents: HEARON & Co., London, and most Provincial Wholesale Druggists. PREPARED BY THE INVENTOR, B. ROBINSON, MANUFACTURING CHEMIST, DISTILLER, AND BREWER OF BRITISH WINES, MANCHESTER.



BATTLE'S VERMIN KILLER. { Mice eat it readily and Die on the spot.



Has an immense Sale, and wherever introduced never fails to give satisfaction.—Mice appear attracted to it as by magic, eat it readily, tumble over, and die on the spot. Rats usually die in their runs.—Parties troubled with Vermin may be cleared at once, either from Stacks, Houses, or Ships.

TESTIMONIALS.—Thousands might be published.

From Mr. THOMAS COLTON, Agent for Selby.—A friend of mine purchased a Packet of your VERMIN KILLER last night, doubting its efficacy; to-day he called in to say that he had found fifteen dead mice, and had only used part of a packet. — From Mr. EDWARD STURDY, Flemington Mills.—I duly received by post the Packet of your VERMIN KILLER, and found it as represented in your advertisement. It speedily destroyed all the mice in my granary. I enclose 2s. for two more Packets.—Leeds, November 6th, 1887.—I have tried BATTLE'S VERMIN KILLER, and have found it most effectual in clearing my premises of LARGE QUANTITIES OF RATS.—THOMAS S. CROSLAND.—Mr. Stead.

Sold in Packets, 8d., 6d., and 1s. each.

SOLE PROPRIETOR:

Mr. J. R. BATTLE, Chemist, Lincoln, England.

No Chemist or Storekeeper should be without a supply.

SUPPLEMENT TO THE CHEMIST & DRUGGIST

For the ADVERTISEMENT of

Businesses for Disposal, Employers Wanting Assistants, Assistants Wanting Situations, Partnerships, Premises to Let, Sales by Auction, &c.,

AND

EXCHANGE COLUMN FOR DISPOSAL OF SURPLUS STOCK, ETC.

Advertisements for this Supplement must be prepaid, and can be received at the Office, 42 Cannon Street, until 5 p.m. on Thursday afternoon, or by first post on Friday morning of each week.

Remittances payable to EDWARD HALSE, crossed MARTIN & CO. Stamps are taken in payment.

TERMS—Businesses for Disposal, Employers wanting Assistants, Partnerships, Businesses to Let, Sales by Auction, 5 lines (fifty words) and under, 3s. 6d.

Assistants wanting Situations, 12 words for 1s.; every additional 3, 4, or 6 words, 6d.

FOR EXCHANGE COLUMN TERMS SEE PARAGRAPH AT THE HEAD OF THAT SECTION.

CHEMISTS' TRANSFERS.

MESSRS. ORRIDGE & CO., 32 LUDGATE HILL, E.C.,

CHEMISTS' TRANSFER AGENTS,

May be consulted at their Offices on matters of SALE, PURCHASE, and VALUATION. Immediate attention given to Foreign Commissions. The Business conducted by Messrs. ORRIDGE & Co. has been known as a Transfer Agency since the year 1846, and is well known to all the leading firms in the Trade. VENDORS have the advantage of obtaining an opinion on Value derived from extensive experience, and are in most cases enabled to avoid an infinity of trouble by making a selection from a list of applicants for purchase, with the view of submitting confidential particulars to those alone who are most likely to possess business qualifications and adequate means for investment. PURCHASERS who desire early information regarding eligible opportunities for entering business will greatly facilitate their object by describing clearly the class of connection they wish to obtain.

Particulars of any of the following will be sent free on application:—

1. WEST OF ENGLAND (Large Town).—A first-class Dispensing and Proprietary Business; returns over £700 yearly, with profits much above the average; handsome shop and good stock; may be purchased either by valuation or lump sum.

2. SEAPORT (West).—Established Dispensing and Retail; returns average between £450 and £475 yearly, with good profits; well-fitted shop and good stock; price £450.

3. DUCKS.—Important and thriving town; Mixed Business, capable of extensive development; returns over £2,000, with good profits; good roomy shop and excellent residence; terms about £450, and valuation of stock and fixtures.

4. KENT (Large important Town).—Dispensing and Retail, with good Proprietary Trade; returns £750 to £800 yearly, all good profitable business; good sized shop and comfortable house; price about one year's returns.

5. ON THE BANKS OF THE THAMES.—In a pretty locality; good-class Dispensing and Retail; returns £550; profits more than ordinary; small house and large garden, overlooks the river; rent low; price £530.

6. EASTERN COUNTY.—Old-established good-class Agricultural Trade; no material opposition for a long distance; returns £1,100, all full prices; price about £1,000; full investigation.

7. WILTS.—Unopposed Business, Retail, Prescribing, and Dispensing; returns average between £550 and £600, with ample scope for large extension; good house and garden; rent very low; price £420.

8. WALES.—Good-class Business in first-rate commercial (main street); returns last year £750; must be sold in consequence of death of proprietor; easy terms.

N.B.—No CHARGE TO PURCHASERS. Other Businesses, Town and Country; particulars free on application. Personal applicants receive Messrs. O. & Co.'s direct attention and advice, where required, free. Terms for Valuation on application.

ORRIDGE & CO.

SALE BY TENDER.

All Advertisements should reach the Office, 42 Cannon Street, by 5 p.m. on Thursday afternoon, or first post on Friday morning of each week.

1 COVENTRY ROAD, BORDESLEY, BIRMINGHAM.

F. J. BRETT is instructed by Mr. A. L. Smith to Sell by Tender in one lot as a going concern the old-established light Retail, Prescribing, and Dispensing Business at the above address. The returns last year were £1,008 6s. (of which about £200 was in mechanical dentistry), and of a very profitable character. The shop has a fine commanding stand, is well fitted, and has excellent dwelling-house attached, with private entrance and large yard; rent £45, with 5 years of lease to run. As the health of Mr. Smith's family renders it imperative that he should go into the country, no reasonable offer will be refused. Tenders will be opened by F. J. Brett, of Leicester, on the above premises on Friday, July 30, at 3 P.M. precisely. Tender forms and further particulars can be had on the premises, or from F. J. Brett, Leicester.

SALE BY AUCTION.

38 HOUNDSDITCH, CITY.—MONDAY NEXT.

MESSRS. BERDOE & CO. are instructed to Sell by Auction all the fittings, fixtures, utensils, and drugs of the business of Messrs. Hillgenburg, 38 Houndsditch, consisting of 2 mahogany counters, several nests of drawers, shelving, 350 shop rounds, and a large stock of drugs, sundries, patent medicines, &c. The same will be Sold in Lots on the premises on Monday, July 26, at one o'clock precisely. On view Saturday and morning of Sale. Catalogues of the Auctioneer, 30 Jewry Street, Aldgate, City.

FOR SALE.

SHOP FITTINGS for Sale; nest of 42 small and 20 large drawers with shelving over mahogany front, 10 x 9, and sundry shelves, 2 counters, mahogany tops, show-cases and window carboys; also a number of stock bottles; all in good condition; reasonable offer accepted. Address, 16 Mandale Road, South Stockton.

BUSINESS WANTED.

WANTED, to Purchase a light Retail, Dispensing, and Prescribing Business; must be genuine and have good house attached (8 rooms at least). "Rex," Post Office, Thetford, Norfolk.

BUSINESSES FOR DISPOSAL.

PLYMOUTH.—Established 32 years; improving neighbourhood; no opposition in same street; a main thoroughfare; post-office attached; would be sold a bargain (£300) to immediate purchaser, proprietor being extremely ill must retire; capital chance for energetic man; returns might be doubled easily. J. Dampney, Chemist, Plymouth.

FOR SALE, an old-established Retail and Dispensing Business in the Midlands; returns secure; one year will more than cover purchase; very comfortable and healthful house; good garden and premises; immediate possession if required; price £400. For particulars and to view, address "Carbon," Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

AN old-established (1797) Retail Prescribing and Dispensing Chemist's and Tea Dealer's Business in the best market town in Cornwall; fine shop, house, and premises; long lease; fixtures, fittings, utensils in trade, receipts, lease, and goodwill at a fixed price; stock at valuation; no agents. Apply, J. Sambell, Chemist, Redruth.

A GOOD-CLASS Retail, Dispensing, and Agricultural Business, with Gilbey's sole agency attached; best position in one of the best market and manufacturing towns in the North of England; splendid opportunity for intelligent business man with capital; satisfactory reasons for disposal. Apply, "Pharmacist," care of Wright, Layman & Umney, Southwark Street, London.

TO CHEMISTS, SURGEONS, &c.—Old-established profitable (chiefly Prescribing) and Retail Business for immediate disposal; most populous neighbourhood; thousands pass daily; near docks; proprietor having another different business in Liverpool compels him to sell, also family matters; immediate cash purchaser beneficially treated. Address, "Epithea," care of Mrs. Griffiths, 14 Chantry Road, Southampton.

TO BE SOLD immediately, Business of Chemist and Dentist, near Victoria Station; all full prices; returns £400; good house, garden, and long lease; owner going entirely into dental profession; price £300 cash for quick sale. Apply, P. H., Office of THE CHEMIST AND DRUGGIST, 42 Cannon Street, E.C.

FOR SALE, old-established Drug Business; situate in the centre of a good and populous manufacturing town in Yorkshire (present hands 15 years); returns average £800; good shop, well fitted up, dwelling-house, &c.; rent £40; price for stock and fixtures £400. Apply, J. H. Powley, Brighouse.

EMPLOYERS WANTING ASSISTANTS.

QUALIFIED ASSISTANT; accustomed to first-class business; state age, experience, salary, and references. Also well-educated Youth as Apprentice. Charles Roebuck, Apothecaries' Hall, and 52 High Street, Rhyl, North Wales.

COMPETENT Assistant, indoors, for Mixed business; total abstainer preferred; not over 30 years of age. Send full particulars, with carte, W. E. Giles, Pharmaceutical Chemist, Newport.

WANTED immediately, for about 2 months, Junior Assistant to manage branch; indoor; state salary and send reference, photo, and when disengaged, to Cornus, 1 Mount Pleasant, Finch Road, Douglas, Isle of Man.

ASSISTANTS WANTING SITUATIONS.

Announcements appearing under this heading are charged.

12 WORDS FOR 1s.;

every additional 3, 4, or 6 words 6d.

WANTED, situation to manage business in small town (about £200), with view to purchase, in Gloucestershire or Monmouthshire; married; highest references both business and private. T. S., care of Mr. A. Davies, Chemist, Prestcign.

AS MANAGER or Senior; fully qualified; registered Dentist; thorough experience; disengaged; outdoor preferred. C. H., 27 Leyton Road, Stratford.

MR. S. SMITH, Chemist, 76 Devonshire Street, Bridgewater, takes occasional Confidential Charge during absence or illness.

RE-ENGAGEMENT by an energetic Man with tact and good practical experience in Mixed Class businesses; not qualified; abstainer; aged 37; height 5 feet 8 inches; single; outdoor preferred. "Hydrargyrum," Mr. Fletcher, Chemist, Totton, Hants.

AS ASSISTANT or Manager; good references; Minor and A Hall qualifications; outdoor preferred. "Nemo," 18 Lambeth Road, S.E.

TEMPORARY; disengaged August; qualified; good references. Wheldon, 29 Hudson Street, South Shields.

APPRENTICESHIP.

WANTED, to Apprentice, in a good Pharmaceutical establishment in or near London, a Youth who has just left school; 16 years of age; in or out door. Particulars to H. S. Mannington, Knollys Road, Streatham, S.W.

MISCELLANEOUS.

All Advertisements should reach the Office, 42 Cannon Street, by 5 p.m. on Thursday afternoon, or first post on Friday morning of each week.

PRELIMINARY & MINOR.

ALL STUDENTS who are preparing should send for particulars of a method of study which will enable them to pass with ease. Enclose stamped envelope to Mr. J. Tully (Hills Prizeman), Chemist, Hastings. Established 1872. References to past and present Pupils. 43 out of 51 Pupils passed the last Examinations.

DENTAL NOTICE.—SOUTH KENSINGTON LADIES' DENTAL INSTITUTION, Sussex House, 43 Sussex Place, Old Brompton Road, S.W.—It having come to the knowledge of the gentlemen concerned in the above, that a report has been promulgated which might lead the public to believe that Mr. H. F. Partridge, F.S.S., L.D.S., R.C.S., has resigned his position of Senior Consulting Dental Surgeon to this Institution, the correctness thereof may be judged from the following:—

(COPY.)

July 15, 1886.

Gentlemen,—I hereby certify that it is not my intention to resign my position as Senior Consulting Dental Surgeon to the South Kensington Ladies' Dental Institution, the success of which has doubtless given rise to a vicious feeling on the part of that portion of the community from whom such an erroneous report emanates.

(Signed) H. F. PARTRIDGE, F.S.S., L.D.S.,

Royal College of Surgeons, Consulting Dental Surgeon.

EXCHANGE COLUMN.

TERMS.—Announcements are inserted in this column at the rate of one halfpenny per word, on condition that name and address are added. Name and address to be paid for. Price in figures counts as one word. If name and address are not included, one penny per word must be paid.

FOR DISPOSAL.

Dental.

Two Owen's chairs and 2 engines, modern hand-pieces, half price; also lot of forceps (some Eyraud's), excavators, pluggers, gas-bag and bottles, &c. Apply, Mr. Hulme, 4 Finchbury Square, E.C.

Drugs and Chemicals.

About 2 cwt. gum arabic, 9d. per lb.; samples. J. P., Box 123, Post Office, Halifax.
Quicksilver, 20 bottles, at 6l. 10s. net cash, part or all. Floyd, Bury St. Edmunds.
Aloes Barh. opt., 28 lbs.; tereh. chio ver., 8 oz.; arsenic, pulv., 30 lbs.; arsenic, lump, 50 lbs.; exchange for percolator, tincture-press; or cash offers. Willis, Chemist, Stockport.

Educational.

Tully's "Course to Preliminary," 6s., direct. 10/17.
To Students.—"Hints on Difficult Pills, and their Excipients;" post free 7 stamps. Clifton, 13 St. Michael's Terrace, Wood Green, London.

Literature.

Pharmaceutical Journal day after publication; highest cash offer; money prepaid, including postage. Lamb, 93 Westborough, Scarborough.

Shop Fittings.

Handsome specie-jar, as Maw's fig. 1; height, exclusive, 26 in.; square mahogany stand, 7 in.; price 45s. Nuttall, Higher Broughton, Manchester.
Looking-glass, 57 in. by 36 in., handsome moulded mahogany frame; nest drawers, gold labels, glass knobs; 24, 1-gallon store bottles, 24s. 112 High Street, Wolswich.
Second-hand Fittings.—Spanish mahogany counter, 19 ft., 16l.; 9-ft. dispensing ditto and screen, 2 ft. 5 in. high, and tablet, 12l.; mahogany-fronted dovetailed drug-drawers, cover-boards, grained lockers; 14 ft. 5 in., 2 nests, 112, 10l.; mahogany wall-case, sheet-glass sashes, fixed shelving, and grained cupboard under, 12 ft. 8 in. long, 8 ft. 10 in. high, 9l.; counter-cases, as Maw's A 4—48 in. long, 27 in. high, shelves, tablet, carving, 8l.; plate-glass case, ebonised, 73 in. by 22½, 4l. 10s.; counter-case, sloping flaps and tablet, 82 in. by 17 in., 2l. 10s.; upright Spanish mahogany counter-case, 78 in. by 33 in., 5l. 10s.; desk with brass rail, 30 in., 35s.; 2 mahogany chairs, carved backs, 30s. Hawke & Son, Wild Court, Great Wild Street, London.

Dispensing-screen, with mirror and marble slab in centre, glass case at each end; price, 5l. 10s., package free; too large for counter; very cheap. James Watson, Rose Corner, Norwich.

All numbers refer to Maw's illustrated of 1882.—Plate-glass wall case, A 88, 7 ft. 6 in. long, 22l.; plate-glass fronted counters, mahogany counters, mahogany-fronted drawers, new and second-hand wall fixture, complete with drawers, lockers, cupboards, shelving and cornice, 12 ft. long, 8l. 10s.; ointment jars, carboys, 8 and 10 gals. specie jars, pill-machines; shop rounds, 7s. 6d. doz.; toothbrush-case, 30s.; sponge-case, 60s.; counter-cases, fig. A 3, 40s.; A 4, 5l.; A 8, 5l.; A 8, 5l.; A 18, 5 ft., 4l. 15s.; 6 ft. long, 5l. 10s.; desks and cases, A 31, 60s.; cigar-cases; dispensing screens with marble centre with glass-case at each end, 5 ft., 5l. 10s.; others larger; dispensing-screens, A 54, 3 ft. long, 3 ft. 6 in. long, 4 ft. long; as fig. 55, 5 ft. long, 6 ft. long; Pinder's rotary pill-machine and piper, 5 grain, almost new, complete, 6l. E. Natali, 207 Old Street, London, E.C.

Formulae.

Formula of an elegant and refreshing perfume, simple and easy to prepare, together with a novel and original title for the same, 2s. 7d.; this would make a splendid proprietary, and is worth attention, as with a little publicity the title alone would inevitably command large sales amongst the aristocracy. Mr. Fairweather, 110 Cheltenham Road, Bristol.
Devoniensis Lavender Water.—Those of the trade who have not availed themselves of former opportunities of purchasing my formula for above can now do so by forwarding half-crown postal order to Devoniensis, Broadhempston, Totnes. Recent testimonial:—"By adopting your formula my sales of lavender water have considerably influenced my returns. It is certainly far and away the best recipe I have ever compounded."

Seasonable Proprieties, wanted daily.—"Mollispena," for tender feet; "Red Rose Lotion," invaluable at seaside; "Glycerine Cream," resembles Beetham's; "Perspiration Powder," effective without danger; "Effervescent Saline," like Eno's, costs 10d. lb.; "Diarrhoea Mixture," pronounced infallible; "Diarrhoea Powders," indispensable to tourists; "Custard Powder," like Bird's; delicious "Blancmange Powder," economical and tasty; "Bengal Chutney," makes cold meat enjoyable; "Ginger-beer Powder," unexcelled; 3d. packets "Lemonade Powder," cooling, refreshing, cheap; "Syrup Lemons," new form, delicate flavour; "Herb Ale," non-alcoholic, sparkling; "Bark Beer," true temperance potation; "Cold Cream"; "Toilet Vinegar"; "Eau de Cologne"; "Hair-washes," &c. Recipes 1s. 1d. each, 6 for 5s., free, with full directions; send for list of 300. T. Brooks, Chemist, Louth, Lincs.

Miscellaneous.

Seven dozen 2-oz. covered pots, heavy, look like 4-oz., for 8s. Hagon, Chemist, Cardiff.
Cnhebs powder, ¾ lb., whole, 3s. 1b., post free. Floyd, Bury.
Trusses.—5 doz. assorted sizes and sides, 12s. doz., very slightly soiled. 9/2.
Thirty cylindrical lozenge bottles, 30 oz., tin lids; what offers? B. Shaw, Halifax.
One hundred fly-papers, extra strong, fresh and clean, 1s. 4½d.; 500, 6s. 3d., carriage paid; sample sent. Fortune, Anstruther.
Valuable collection of microscopic slides, sell cheap; mahogany slide cabinet, holds 238 in drawers, glass doors, 30s. Tylar, 31 Yates Street, Aston, Birmingham.
Sale or exchange, 6 doz. 1s. 1½d. size tikheel, at 8s. 6d. per doz.; mahogany-top counter, 5 drawers, 9 ft. long, cheap. Alexander, Chesterfield.
Vulcauser and dental lathe, 3l., cost 6l.; 6-gallon carboy, 12s.; six gross pound hair-oil bottles, long necks, 7s. gross. Butterworth, Chemist, Oswaldtwistle.
Excellent monocular microscope, by Nachet, in flat cabinet, 5 objectives, 3 eye-pieces, and numerous accessories; price 11l. Dr. Thresh, Buxton.
Bovine cattle spice, 1-lb. packets, 2 cwt. for 30s.; Bigg's sheep dip, two at 3s. for 4s.; six at 2s. for 7s. 6d.; Boyd's taraxene, two for 3s.; carriage paid. Griffith, Pharmacist, Blandford.
Glass Bottles.—About 8 gross pale-green tinted 3-oz. round pomades, screw nickel capped, 12s. per gross; 4 gross 14-oz. round-shouldered vials, white, best quality; several other lines equally cheap. Hearn, Riddell, Kingsland Road, London.
Cheap lines druggists' sundries, quality guaranteed.—Black feeders, 27s. gross; screw feeders, 33s. gross; black tubing, 7s. lb.; black teats, 5s. gross; white teats, 4s. gross; boat feeders, 3s. 6d. doz.; nipple shells, 1s. 10s. doz.; 1-drachm pink cuts, 4d. gross; porcelain feeder cups, 4s. 6d. doz.; 8-oz. glass plug salines, 13s. 6d. gross; 4-lb. blue ointment jars, 27s. doz.; 4-lb. French counter-scales, 15s. 6d.; marble ditto, 17s.; 16-oz. blue syrup bottles, 9s. doz. Simcock, Guildford Street, Leeds.

WANTED.

Wanted, magnifying glass for showing photos in shop window. Hagon, Chemist, Cardiff.
Bradbury's sheep-dipping powder; must be cheap. Skelton, Ashwell, Herts.
Percolator, 1 gallon (York Glass Co.); state if perfect, and price. Clifton, Ipswich.
Two suppository moulds for 24 each. Felix Stevens, 51 Judd Street, W.C.
London Pharmacopœia, Latin. Rose, 110 Victoria Park Road, E.
Pinder's pill machine, to cut 3-grain pills, in good condition. F. Gibson, Gooch Street, Birmingham.
Index for *Chemist and Druggist* for 1880, 1881, 1883, 1884; state price. Lockwood, Moor, Sheffield.
No. 12 or 14 composition mortar and pestle; will give in exchange a 2-pint glass displacement apparatus, as Maw 53-444, cost 22s., complete. 2/4d.

TELEPHONE No. 1852.

JOURNAL OF THE TRADE. WEEKLY.

BRANCH OFFICES:

AUSTRALIA—Normanby Chambers, Melbourne. **UNITED STATES**—41 Temple Court, New York.

Exchange Column.

We reserve to ourselves the right to decline any advertisement sent to us for this department, and, of course, general business advertisements are not admitted.

TERMS.

Advertisements in this department must be paid for in advance. From this rule no deviation can be made. Insertions are charged at the rate of **1d.** per word, provided the advertiser attaches his name and address, for each word of which he must also pay at the same rate; or, if he pays **1d.** per word, his name and address will be registered and a figure attached to his advertisement. All correspondence referring to that figure must be addressed to "The Publisher of the CHEMIST AND DRUGGIST, 42 Cannon Street, E.C., " and the figure must be distinctly endorsed upon the envelope. Letters will then be forwarded to their proper destination. A price is counted as one word, as *e.g.*, £1. 10s. 6d.

Please write out your advertisement in this diagram, one word in each space. You will then see at a glance how much the cost will be—namely, 1d. per word, if your address is kept private; ½d. per word, if your name and address is attached.

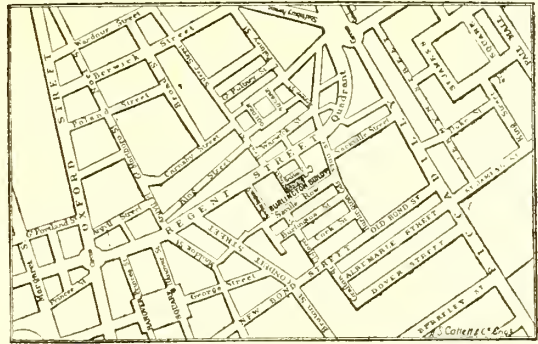
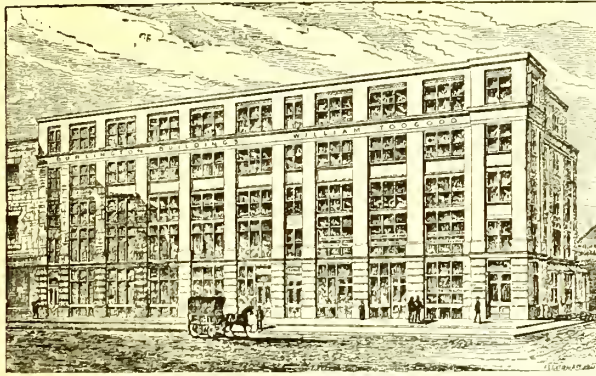
DEPOSIT OF MONEY.—In order to ensure safety we offer the following system :—The purchaser of anything advertised in the Exchange Column may remit the amount to us. We acknowledge receipt to both parties by post cards, and only pay the money deposited on the advice of the remitter. Whether returned to him or paid to the seller, we charge a commission of 6d. on any transaction of £3 or less, or 1s. if above that amount.

[illegible]

Please note that all advertisements of surplus stock, second-hand books, shop fittings, Formulae, rare or unusual proprietary articles, are accepted for the "Exchange Column," but not *general* announcements. Stamps are taken in payment.

Remittances payable to EDWARD HALSE, at the G.P.O., London, and crossed MARTIN & Co.

Subscription Rate: 10s. per Annum, 52 Weekly Numbers and Diary, all Post-free. Single Copies of "THE CHEMIST AND DRUGGIST," 4d. each.



WILLIAM TOOGOOD'S NEW PREMISES.

WILLIAM TOOGOOD,
WHOLESALE AND EXPORT
GLASS BOTTLE MANUFACTURER
 AND
DRUGGISTS' SUNDRYMAN,
 HAS REMOVED FROM
35, 36 & 37 MOUNT STREET, GROSVENOR SQUARE, W.,
 TO
BURLINGTON BUILDINGS,
HEDDON STREET, REGENT STREET, LONDON, W.

TO OUR CLIENTS AND FRIENDS.

SIRS,—On the occasion of advising you of our change of address, consequent, firstly, by the expiration of leases of premises which we have occupied for the past 56 years, and, secondly, by the necessity of obtaining greater accommodation to meet an increasing trade, we take the opportunity of thanking our friends for the support which has been accorded to us in the past, and to hope that we shall meet, not only with the same, but an increased support in our new premises.

Having greater facilities, our stock will be gradually extended to meet all requirements of the Trade, and our system of administration will be such as to secure the prompt execution of all orders entrusted to our care.

Our Show Room will contain a full line of samples of our manufactures, and we solicit a visit of inspection from all our friends—town, country, colonial, and foreign.

Yours truly,

WILLIAM TOOGOOD.

AUSTRALIAN AGENCY AND SAMPLE ROOM:

Mr. A. I. JOSEPH, Bond Street, Sydney.

Telegraphic Address: "TOOGOOD LONDON."

Telephone No. 3834.

William Toogood's Price Current of Glass Bottles, Measures, Earthenware, Druggists' Sundries, &c., will be forwarded post free upon application.

SPECIAL ATTENTION GIVEN TO SHIPPING ORDERS.

PARIS 1878—AWARD, THE ONLY GOLD MEDAL FOR PLUMBAGO CRUCIBLES.
THE SALAMANDER BRAND OBTAINED THE SOLE AWARD FOR CRUCIBLES AT FRANKFORT, 1881 (GOLD MEDAL).

THE MORGAN CRUCIBLE COMPANY

(THE PATENT PLUMBAGO CRUCIBLE COMPANY)

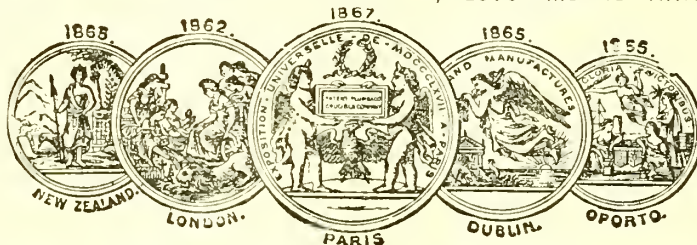
PHILADELPHIA CENTENNIAL EXHIBITION, 1876—MEDAL AWARDED.

Moscow Exhibition,
1872.

Gold Medal. SOLE Award
for Crucibles.

Amsterdam Exhi-
bition. 1869.

Highest Award for Crucibles.



Havre Exhibition,
1868.

ONLY First-Class Medal
(Silver) awarded.

Paris Exhibition,
1867.

The only First-class Medals.
Silver Medals,
Classes 40 and 51.

BATTERSEA WORKS, LONDON, ENGLAND
(SOLE MANUFACTURERS OF MORGAN'S AND SALAMANDER CRUCIBLES).

SALAMANDER-CRUCIBLES,

Patented in Great Britain, Germany, France, Italy, United States, &c., &c.

ARE NOT AFFECTED BY MOISTURE OR FROST.

The only Plumbago Crucibles that require NO ANNEALING.

Each number contains about 2 lbs. English (thus, No. 25=50 lbs. capacity), and are so stamped.

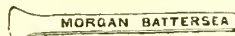


No. 5 0.. per doz.	£0 0 8	No. 5 .. per doz.	£0 15 0	No. 25 .. each	£0 6 3	No. 99 .. each	£1 2 6
40..	0 1 1	60..	0 15 0	30..	0 7 6	100..	1 5 0
30..	0 1 4	40..	1 4 0	35..	0 8 9	120..	1 10 0
20..	0 2 0	10..	1 10 0	40..	0 10 0	150..	1 17 6
0..	0 2 6	12..	1 16 0	45..	0 11 3	200..	2 10 0
1..	0 3 0	14..	2 2 0	50..	0 12 6	250..	3 2 6
2..	0 3 6	16..	2 8 0	60..	0 15 0	300..	3 15 0
3..	0 4 0	18..	2 14 0	70..	0 17 6	400..	5 0 0
4..	0 12 0	20..	3 0 0	80..	1 0 0	500..	6 5 0

SALAMANDER MUFFLES, to suit above Crucibles, 2d. per Number.



SALAMANDER COVERS, 1d. per No.



19-in. STIRRERS, 12s. per dozen.



STANDS, 1d. per No.



TRADE MARK.

INDENT FOR SALAMANDER-CRUCIBLES

And thereby ensure getting DAMP-PROOF CRUCIBLES
manufactured by

THE MORGAN CRUCIBLE COMPANY.

FLUXING POTS.

IDENTICAL WITH THE FRENCH IN QUALITY, FORM, AND CAPACITY.

No.	Height, inches.	Hauteur, milli.	Diameter, inches.	Diam-ter, milli.	Per dozen Crucibles.
0	3	*050	1 1/2	*030	£0 0 4
1	3	*055	1 3/4	*035	0 0 6
2	3	*060	1 5/8	*038	0 0 8
3	3	*070	1 7/8	*042	0 0 10
4	3	*080	2	*045	0 1 0
5	3	*090	2 1/8	*050	0 1 2
6	3	*100	2 1/4	*055	0 1 4
7	3	*110	2 3/8	*062	0 1 6
8	3	*120	2 1/2	*068	0 1 10
9	3	*135	2 3/4	*074	0 2 4
10	3	*150	2 7/8	*080	0 2 9
11	3	*165	3	*085	0 4 9

All sizes upwards can be supplied.

COVERS TO FIT ALL SIZES.



ALL DAMP-PROOF CRUCIBLES manufactured by THE MORGAN CRUCIBLE COMPANY

Are distinguished by the Brand

“SALAMANDER.”

BATTERSEA ROUND.

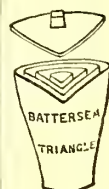
Stamped as on illustration.



No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.	No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.
A	3 1/2	1 1/2	0/5	0/6	B	3	1 1/2	0/6	0/6
C	3 1/2	1 3/4	0/9	0/6	D	4	1 3/4	0/10	0/6
E	3 1/2	1 5/8	1/4	0/9	F	5	1 5/8	1/5	1/0
G	3 1/2	1 7/8	2/0	1/0	H	3 1/2	2 1/8	2/1	1/3
J	3 1/2	2	3/0	1/6	K	4 1/2	2 3/8	3/2	2/0
L	3 1/2	2 1/8	5/6	2/0	M	5 1/2	2 7/8	6/6	2/6
N	3 1/2	2 1/4	9/0	3/0	O	10	3 1/2	13/6	3/6
P	11	3 1/2	15/0	3/6	Q	12	3 1/2	17/0	4/0
R	13	3 1/2	23/0	5/0					

BATTERSEA TRIANGLE.

Stamped as on illustration.

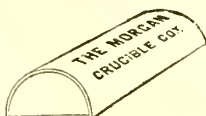


No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.	No.	Height, inches.	Width, inches.	Crucibles per doz.	Covers, per doz.
U	4 1/2	4 1/2	2/0	1/0	V	4 1/2	3 1/2	1/8	1/0
W	3 1/2	3 1/2	1/1	0/9	X	3 1/2	2 1/2	0/10	0/9
Y	2 1/2	2 1/2	0/8	0/6	Z	1 1/2	1 1/2	0/6	0/6
			0/5	0/5				9/4	0/6

SCORIFIERS.



MUFFLES.



ROASTING DISHES.

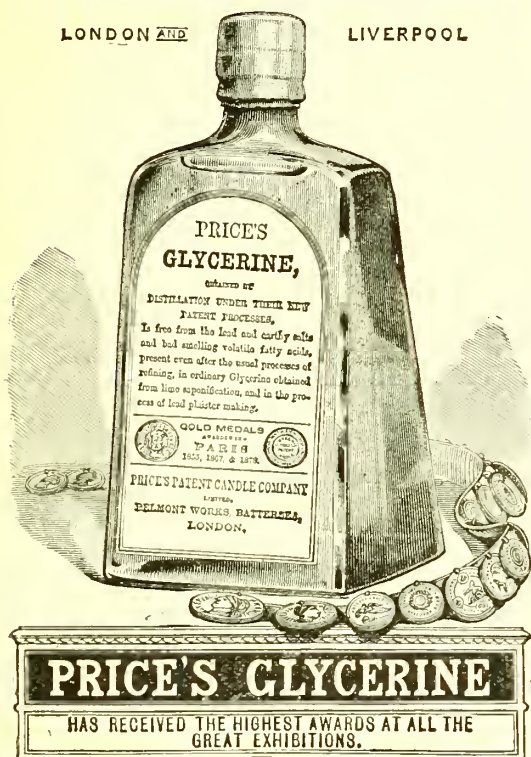


NOTICE.—Care should be taken in all instances, when ordering, to specify the Crucibles, &c., manufactured by
THE MORGAN CRUCIBLE CO. (Sole Manufacturers of Morgan's and Salamander Crucibles), Battersea Works, LONDON, S.W.

PRICE'S PATENT CANDLE COMPANY LIMITED

LONDON AND

LIVERPOOL

**ROZALUM**

(REGISTERED)

POWDER OR PASTE

IS THE BEST DENTIFRICE.

It is scientifically prepared by a Dental Surgeon, of large practice and great experience, and is intended to supply a long felt want, viz., a Preparation that will thoroughly cleanse the Teeth, and at the same time help to preserve them. As a stimulant to the Gums, and a preservative of the Teeth, Rozalium is not to be surpassed; it gives to the Teeth a pearly whiteness, to the Gums a healthy rosy colour, whilst it prevents decay by neutralizing the acids which accumulate between the Teeth, and imparts to the Breath a most delicious fragrance.

In Boxes, Pots, and Bottles, 1s. 6d. and 2s. 6d.

May be obtained from the Wholesale Houses, or direct from the Proprietor—

**J. W. MARTIN, Dental Surgeon,
P E N G E .**

This Unique Preparation has the extraordinary property of keeping the

HAIR IN CURL.

Now used by Ladies in all parts of the World.

Needs but an introduction to command a ready and constant sale.

FRIZZETTA
(REGISTERED.)
Supplied by all London Pat. Medicine Houses.
Handsome Show-cards, Glass Tablets, and Circulars profusely supplied.
Foreign and Colonial Chemists should write for Terms, &c.

**F. W. BATES, CHEMIST,
BROOKS'S BAR, MANCHESTER.**

**HAWLEY'S
WHITE ROSE & SANTAL**

A case containing Two Bottles, and a small Glass Male Syringe. One Bottle contains an injection with Rose Water, according to a recently published formula, and the other Evans' Compound Liquor of Yellow Sandal Wood. Full directions.

For Prices see Hawley's Counter Adjuncts, to be had on application to

EVANS, LESCHER & WEBB,

60 Bartholomew Close,

LONDON.

EVANS, SONS & CO.,

56 Hanover Street,

LIVERPOOL.

MANCHESTER, BIRMINGHAM, MONTREAL,
PARIS, AND SYDNEY.

Wholesale and Export Druggists; Drug Importers; Manufacturers of Pharmaceutical Preparations; Drug Grinders; Druggists' Sundries Manufacturers; Proprietors of Savars Specialities, Hawley's Counter Adjuncts, Savarasse's Capsules; Sole Consignees of Montserrat Lime Fruit Juice, &c.

**Matthews's
Fullers 6d. & 1s.
Earth. Boxes.**

Used in the Royal Nurseries, and highly recommended by the Faculty; it protects the Skin from cold winds, chaps, &c., and preserves the Complexion.

SOLD BY ALL THE WHOLESALE HOUSES.

ROUSE & CO., 12 WIGMORE STREET, LONDON.

TRADE NOTICE.

WHEELER'S GLYCERINE JELLY is NOT LIABLE to Patent Medicine Stamp Duty. Any stock held bearing labels issued prior to 1st of January last may be EXCHANGED on returning it to the Wholesale House it was obtained from, or direct from 143 HACKNEY ROAD, LONDON, E.

Please observe the new label now in use is identical with the old, minus two words—

"BROKEN CHILBLAINS."

HORN & SON

AUTHORISED AGENTS FOR PROCURING

PATENTS AND TRADE MARKS,
SOMERSET CHAMBERS, 151 STRAND, LONDON
(NEXT TO SOMERSET HOUSE).*Guide to New Patent Law and Registration gratis.***DR. G. H. JONES, F.R.S.L., &c.,****SURGEON-DENTIST,**57 GREAT RUSSELL STREET, LONDON
Facing British Museum entrance).Will forward his New 64-page Pamphlet, entitled "PAINLESS AND PERFECT DENTISTRY," which contains a List of the Diplomas, Gold and Silver Medals, and other Awards obtained at the Great International Exhibitions, to any part of the world, gratis and post free. *Agents Wanted.***PETROLEUM JELLY,**

EQUAL TO AND CHEAPER THAN VASELINE.

SANITARY FLUID AND SHEEP DIP,
THE CHEAPEST AND BEST DISINFECTANT.

GREASE, PITCH, ASPHALTE, AND ALL PRODUCTS OF TAR AND ROSIN.

*Samples and Prices on application.***GRINDLEY & CO., POPLAR, LONDON, E.**


SPECIAL
PRICE LIST
ON
APPLICATION.



FLY
TRAP.

BOTTLES, VIALS,
AND
CHEMISTS'
CHINA WARE.
LISTS FREE.



GLASS
BLOWERS.

M. DAVIS & CO., LONDON DOCKS, LONDON, E.

"LA BRILLANTINE"**METALLIC POWDER (REGISTERED)**

Is the best, cheapest, and most effective Powder for cleaning and polishing Metals and Glass (specially Brass). It is used by the Life, Horse, and Dragoon Guards, the Fire Brigades, &c., &c. Sold everywhere in 6d. and 1s. Boxes.

Proprietors: J. F. BAUMGARTNER & CO.,
22 Newman Street, Oxford Street, LONDON, W.**E. BRAMWELL & SON, ST. HELENS, LANCASHIRE.****EPSOM SALTS (PURE).
CREAM CAUSTIC SODA.
SULPHITE OF SODA**

(PHOTOGRAPHIC AND COMMERCIAL).

GLAUBER SALTS.**FRED^K FINK & CO.,**

10 & 11 MINCING LANE, LONDON, E.C.

**SPECIALITIES: Glycerine—Gum Arabic—Gum
Tragacanth—Pure Beeswax—Honey—Vanilloes.****ASSAY FURNACES, &c.
THE MORGAN CRUCIBLE CO.,***Sole Manufacturers of*
MORGAN'S and SALAMANDER CRUCIBLES,
BATTERSEA, LONDON, S.W.All kinds of Crucibles in Plumbago, Clay, &c.,
Single and in Nests.
Muffles, Portable Assay and Melting Furnaces, &c.

Read "Assay Notes" in C. AND D., April 15, 1885.

PURE PRECIPITATED CHALK.*Cheapest Sellers in the Market.***Chemicals, Drugs, and Oils at lowest market rates.**

APPLY TO

AUG. LEVERMORE & CO.,
8 LIME STREET, LONDON, E.C.**TYPKE & KING,**

110 CANNON STREET, E.C.

Manufactories—MITCHAM & RAINHAM.



Pure Acids—Valerianic Acid and all Valerianates. Antimony Golden Sulphuret, Antim. Crocus Lump, and Powder. Essences of Pear and Pineapple. Potassium Cyanide, Nitrate of Ammonia, crystal and granulated. Potass. Sulphid. Iron Perchloride, solid and solution. Hypophosphites of Lime, Manganese, Soda, Potash, &c.

HARSTON & CO., LEEDS.**GINGER ALE**From **PURE JAMAICA GINGER ROOT.****SEITZER, POTASS, LITHIA, SODA WATER, LEMONADE,**
FOR HOME OR EXPORT.**POWELL & BARSTOW,**

5 Albion Place, Blackfriars Bridge, London, S.E.,

Late W. HURLSTONE & CO., Blackfriars Road and Vine Street, S.E.,

MANUFACTURERS TO THE WHOLESALE TRADE OF

ELASTIC GUM SURGICAL INSTRUMENTS.

WORKS, LAMBETH.

ESTABLISHED 1830.

ORANGE WINE

(VIN. AURANT, P.B.)

Specially brewed for Quinine Wine, does not deposit. Is well adapted for Export, as it will keep good in any climate. In casks, 13, 27, 55, 112, 140 gallons; small casks 3s. 9d. per gall. carriage allowed. In wine bottles (not less than 3 doz.) at 9s. per doz., including bottles. Cases extra and returnable.

*Sample six stamps. Special quotations to large buyers.***GEO. DURRANT & CO., Hertford.****TO LET.****E. MEINERTZHAGEN,**

9 MINCING LANE, LONDON, E.C.,

Importer of **SARSAPARILLA & IPECACUANHA.****ALL DRUGS AND GUMS SORTED AND PACKED.****PREPARED SILVERY WHITE GUTTA PERCHA ENAMEL
FOR STOPPING DECAYED TEETH.****P. A. STEVENS,**

(LATE OF HOKTOS, N.)

72 MANSFIELD ROAD
HAVERSTOCK HILL, N.W.,SOLE PROPRIETOR AND MAKER OF THE
ABOVE.REGISTERED—NO 3745.
P. A. S. can supply the above to Wholesale Houses in Sheet or Sticks, in any quantity,
with their name stamped upon each piece. Price List & Samples sent Post Free.

EXTRA QUALITY GINGER BEER POWDERS,

"RISING SUN" BRAND. Retail 3d. per Packet.

Superior to all others, being made from selected Jamaica Ginger, and consequently of great strength and fine aroma.

Each packet is in cardboard box, wrapped in foil, so that the powder can be kept for a lengthened period without deterioration.

They are nicely got up, and there is no name on label, merely the brand as below to prevent imitations. This enables them to be sold as seller's own article. Where a quantity is taken customer's own name can be printed

with any alteration of label required. Correspondence on this point invited.

These Powders have been in use for over 30 years, and none other sell so freely, are such good value for money, or give such universal satisfaction, whilst the wholesale price will compare favourably with other makes.

A large trade can be done by selling to small shopkeepers, who will readily pay 1 9 to 2 3 dozen for them. Packed in outer boxes of 3 dozen each

PRICE 16/- GROSS NETT. ONE GROSS CARRIAGE PAID.

SPECIAL WHOLESALE QUOTATIONS FOR 5 GROSS AND UPWARDS.

PROPRIETORS:

W. KEMP & SON, HORNCASTLE.

London Agents—MESSRS. BARCLAY & SONS,

Who hold Stock, and supply at above price in London. N.B.—Specially adapted for export.

FACSIMILE OF LABEL.

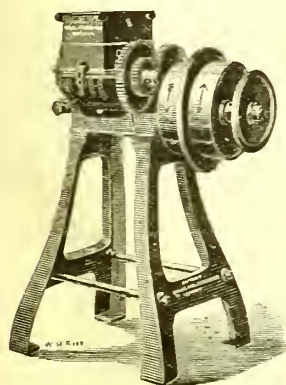
<p>Entered Stationers' Hall.</p> <p>3d.</p>	<p>EXTRA QUALITY.</p> <p>Ginger Beer Powder.</p> <p>"Rising Sun" Brand.</p> <p>Prepared from selected root of the Finest Jamaica Ginger. This packet will make two gallons very superior Sparkling Ginger Beer, with a full delicious flavour. Full directions inside.</p> <p>Price 3d. per packet.</p> 	<p>3d.</p> <p>This Label Copyright.</p>
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CAVELL'S 3^d. GINGER-BEER POWDERS

Are in continual and great demand, which fully testifies their superiority. Better packed for EXPORT than many of the so-called preparations. For sample and terms, which are lower than that of any other maker, apply to

JOHN CAVELL, LONG SUTTON, LINCOLNSHIRE. LONDON DEPOT: 489 OXFORD ST., W.

<p>Extract</p> <p>OF</p> <p>BEEF,</p> <p>PREPARED ON THE</p> <p>LIEBIG</p> <p>PRINCIPLE BY</p> <p>A. SANTA MARIA</p> <p>& CO.,</p> <p>PAYSANDU.</p>	<p>Acknowledged to be Finest imported, and guaranteed to average 60 per cent. of dry solid Extract.</p>	<p>Analysis made by Dr. Volcker & Sons of each Parcel, can be had on application to</p>	<p>HUGO BROWN & CO.,</p> <p>41 ORMOND ST.,</p> <p>LIVERPOOL,</p> <p>Who will receive orders for 100-lb. lots (in original tins of 20 lbs. each).</p> <p>Price 4/6 net cash per lb Carriage Paid.</p>
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CHEMISTS' MACHINERY.

PILL MASS KNEADING MACHINES.

PILL MAKING MACHINES.

DRUG GRINDING MACHINES.

SIFTING MACHINES.

FULL PARTICULARS OF ABOVE ON APPLICATION TO

WERNER & PFLEIDERER, 88 Upper Ground St., Blackfriars Bridge, LONDON, S.E.

*In the High Court of Justice, London, June 4th, 1886.
Before Mr. Justice North.*

THE HOP BITTERS Co. v. H. PRATT, CHEMIST, YORK.

THE HOP BITTERS Co. v. W. PLATT, CHEMIST, MATLOCK BATH.

In these Actions the Plaintiffs, who carry on business at 41 Farringdon Road, London, and known as the Hop Bitters Co., sought to restrain the Defendants from infringing their trade-mark of "Hop Bitters." Mr. Aston, Q.C., and Mr. Theodore Dodd (instructed by Messrs. Seeley & Son) appeared for the Plaintiffs. The former, in opening the case, said this application was made on behalf of the Hop Bitters Co. in respect to their well-known Hop Bitters, and he now moved for an Injunction "to restrain the Defendants" from infringing the Plaintiffs' trade-mark and vending imitations until the trial of these Actions. Mr. Bardswell, on behalf of the Defendants, elected that the motions be treated as the trial of the Actions.

The Judge immediately granted the Hop Bitters Co. a perpetual Injunction against both Defendants, and that they be condemned to pay the whole of the costs.

CAUTION.—*We direct attention to the Actions reported above, and have fully determined to ferret out all infringements of our rights and (without further notice) treat them in a like manner.*

If any person vending an imitation of "Hop Bitters" is in doubt as to whether he is infringing the trade-mark and rights of the Hop Bitters Co., he has only to ask himself whether he ever put up and sold any form of so-called Hop Bitters of his own manufacture till we had created a demand and popularised Hop Bitters at an enormous expenditure of money.

We know what the answer must be to this question. We shall protect our rights to the fullest extent, and prosecute every person, be they whom they may, who attempts to trade on the reputation and popularity of Hop Bitters, by putting up imitations of any description whatever.

HOP BITTERS CO.

ROCHESTER, N.Y., U.S.A.
LONDON, ENGLAND.
TORONTO, CANADA.

ANTWERP, BELGIUM.
PARIS, FRANCE.
MELBOURNE, AUSTRALIA.